HAROLD L. BRODE

DNA 6032F

# OPERATION CROSSROADS 1946

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United States Atmospheric Nuclear Weapons Tests Nuclear Test Personnel Review

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BAKER Emerges From Bikini Lagoon Amid Target Fleet

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22 ABSTMACT Conducts on measure and it received and denote At Noce returns. Crossroads was the first peacetime nuclear weapons test series. It was conducted at Bikini Atoll in 1946.				
Report emphasis is on the radiological safety of the personnel. Available records on personnel exposure are summarized.				

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## FACI SHEET

Operation CROSSROAMS was an atmospheric nuclear weapon test series conducted in the summer of 1946. The series consisted of two deconations, each with a yield of 23 KT:

- ABLE -- detonated at an altitude of 520 feet (158 meters) on 1 July
- BAKER -- detonated 90 feet (27 meters) underwater on 25 July.

It was the first nuclear test held in the Marshall Islands.

The series was to study the effects of nuclear weapons on ships, equipment, and material. A fleet of more than 90 vessels was assembled in Bikini Lagoon as a target. This target fleet consisted of older U.S. capital ships, three captured German and Japanese ships, surplus U.S. cruisers, destroyers and submatines, and a large number of auxiliary and amphibious vessels. Military equipment was arrayed on some of the ships as well as amphibious craft that were beached on Bikini Island. Technical experiments were also conducted to study nuclear weapon explosion phenomena. Some experiments included the use of live animals.

The support fleet of more than 150 ships provided quarters, experimental stations, and workshops for most of the 42,000 men (more than 37,000 of whom were Navy personnel) of Joint Task Force 1 (JTF 1), the organization that conducted the tests. Additional personnel were located on nearby atolls such as Enewetak and Kwajalein. The islands of the Bikini Atoll were used primarily as recreation and instrumentation sites.

Before the first test, all personnel were evacuated from the target fleet and Bikini Atoli. These men were placed on units of the support fleet, which sorried from Bikini Lagoon and took safe positions at least 10 uni (18.5 km) east of the atoll.

In the ABLE test, the weapon was dropped from a B-29 and burst over the target fleet. In BAKER, the weapon was suspended beneath an auxiliary craft anchored in the midst of the target fleet.

ABLE operations went smoothly except that the test weapon was dropped between 1.500 and 2.000 feet (457 and 610 meters) off target. The radioactivity created by the burst had only a transient effect, and within a day nearly all the surviving target ships had been safely reboarded. The ship inspections, instrument recoveries, and remoting necessary for the BAKER test proceeded on schedule. Five ships were sunk as a result of the test.

The crews of the target ships that had been remanned following ABLE were evacuated before BAKER to the support fleet east of the atoll. BAKER sank eight ships and damaged more ships than ABLE. The detonation caused most of the target fleet to be bathed in radioactive water spray and radioactive debris from the lagoon bottom. With the exception of 12 target vessels anchored in the array and the landing craft beached on Bikini Island, the target fleet remained too radiologically contaminated for several weeks for more than brief on-board activities.

The inability to complete inspections on much of the target fleet threatened the success of the operation after BAKER. A program of target vessel decontamination was begun in earnest about 1 August. This involved washing the ships' exteriors using work crews drawn from the target ships' companies under radiological supervision of monitors equipped with radiation detection and measurement devices. Initially, decontamination was slow as the safe time aboard some of the target ships was measured only in minutes. As time progressed, the support fleet itself had become contaminated by low-level radioactivity in marine growth on the ships' hulls and seawater piping systems.

By 10 August. a decision was made to stop work in Bikini and tow the surviving target fleet to Kwajalein Atoll where the work could be done in uncontaminated water. The move was accomplished during the remainder of August and September. A major task at Kwajalein was to offload ammunition stored aboard the target ships. This work continued into the Fall of 1946. Personnel continued to work on target ships at Kwajalein into 1947.

Eight of the major ships and two submarines were towed back to the United States and Hawaii for radiological inspection. Twelve target ships were so lightly contaminated that they were remanned and sailed back to the United States by their crews. The remaining target ships were destroyed by sinking off Bikini Atoll. off Kwajalein Atoll, or near the Hawaiian (s)ands during 1946-1948.

The support ships were decontaminated as necessary and received a radiological clearance before they could return to the fleet. This decontamination and clearance process required a great deal of experimentation and learning at Navy shipyards in the United States, primarily at San Francisco.

Finally, a formal resurvey of Bikini Atoll was conducted in the summer of 1947 to study long-term effects of the CROSSROADS tests.

Atl CROSSROADS operations were undertaken under radiological supervision intended to keep personnel from being exposed to more than 0.1 roentgen (R) per day. At the time, this was considered to be an amount of radiation that could be tolerated for long periods without any harmful effects on health.

Radiological supervision included predicting areas of possible danger. providing trained personnel equipped with radiation survey instruments to act as guides during operations involving potential exposure, and elaboration of rules and regulations governing conduct in these operations. Personnel were removed for one or more days from areas and activities of possible exposure if their badges showed more than 0.1 R/day exposure. About 15 percent of the JTF i personnel was issued at least one of the 18.875 film-badge dosimeters during CROSSROADS. Approximately 6,596 personnel were on islands or ships that had no potential for radiation exposure. Personnel anticipated to be at greatest radiological risk were badged, and a percentage of each group working in less contaminated areas was badged. The maximum accumulated exposure recorded was 3.72 R. received by a radiation safety monitor.

Lacking complete radiation exposure data. reconstructions have been made of personnel exposures for unbadged crewmembers of the ships involved. These calculations have considered the several sources of radiation at work in Bikini, such as the low-level contamination in the lagoon water. living aboard support ships, and boarding the contaminated target ships. The calculations relied upon radiation measurements recorded by radiation safety personnel in 1946. This data was used in a computer model that includes such factors as the radiation-shielding properties of ships' hulls and realistic patterns of daily personnel activity on weather decks and below. The actual movements of each ship were then used to reconstruct a dose for the crew. Calculated exposures range from 0 to 2.5 rem (gamma) for support ships. Exposures for target ship crews that reboarded their ships after BAKER were higher than those for support ship crews. A summary of film badge readings (in coentgens) for July and August, when the largest number of personnel was involved. Is listed below:

	Total	Ð	0.001-0.1	0.101-1.0	1.001-10.0
July	3.767	2,843	689	232	3
¥ _	100	75	18	6	<0.1
August	6,664	3,947	2,139	570	8
<b>t</b>	100	59	35	9	D.1

Actual Film Badge Readings: (R gamma)

Between 1945 and 1962, the U.S. Atomic Energy Commission (AEC) conducted 235 atmospheric nuclear weapon tests at sites in the United States and in the Pacific and Atlantic oceans. In all, about 205,000 Department of Defense (DOD) participants, both military and civilian, were present at the tests. Of these, approximately 142,000 participated in the Pacific test series and approximately another 4,000 in the single Atlantic test series.

In 1977. 15 years after the last aboveground nuclear weapon test, the Centers for Disease Control (CDC) of the U.S. Department of Health and Human Services noted more leukexia cases than would normally be expected among about 3.200 soldiers who had been present at shot SMOKY, a test of the 1957 PLUMBBOB series. Since that initial report by the CDC, the Vetetans Administration (VA) has received a number of claims for medical benefits from former military personnel who believe their health may have been affected by their participation in the weapon testing program.

In late 1977, the DOD began a study that provided data to both the CDC and the VA on potential exposures to ionizing radiation among the military and civilian personnel who participated in the atmospheric testing 15 to 32 years earlier. In early 1978, the DOD also organized a Nuclear Test Personnel Review (NTPR) to:

- Identify DOD personnel who had taken part in the atmospheric nuclear weapon tests
- Determine the extent of the participants' exposure to ionizing radiation
- Provide public disclosure of information concerning par-Licipation by DOD personnel in the atmospheric nuclear weapon tests.

This report on Operation CROSSROADS is one of a series of volumes that are the product of the NTPR. The DOD Defense Nuclear Agency (IRNA), whose Director is the executive agent of the NTPR program, prepared the reports, which are based on military and technical documents reporting various aspects of each of the tests. Reports of the NTPR provide a public record of the activities and associated radiation exposutes of DOD personnel for interested former participants and for use in public health tesearch and Federal policy studies.

Information from which this report was compiled was primarily extracted from planning and after-action reports of Joint Task Force 1 (JTF 1) and its subordinate organizations. Documents that accurately placed personnel at the test sites were desired so that their degree of exposure to the ionizing radiation resulting from the tests could be assessed. The search for this information was undertaken in archives and libraries of the Federal Government. In special collections supported by the Federal Government, and, where reasonable, by discussion or review with participants.

PREFACE

For CROSSROADS, the most important archival source is the National Archive and Record Center. Modern Military Branch. Washington, D.C. The Naval Archives at the Washington Navy Yard also were helpful, as was the collection of documents in the AFWL Technical Library at Kirtland Air Force Base. Albuquerque. New Mexico. and the Stafford L. Warren Papers at the University of California, Los Angeles. Other archives searched were the Department of Energy (DOE) archives at Germantown. Maryland. its Nevada Operations Office (DOE/NV) archives at Las Vegas, and archives of the Test Division of the Los Alamos National Laboratory.

JTF 1 exposure records and an additional file of exposure-related documents that had been microfilmed by the Reynolds Electrical and Engineering Company. Inc., support contractor for DOE/NV, were also useful.

Primary documentation of personnel movement in areas of potential radiation exposure is limited. This has been compensated for, where possible, with inferences drawn from secondary sources and the exposure records themselves.

The work was performed under RDT&E RMSS B350079464 U99 QMXXX 506-09 H2590D for the Defense Nuclear Agency by personnel from Kaman Tempo. Guidance was provided by Mr. Paul W. Boren of the Defense Nuclear Agency Biomedical Effects Directorate.

# TABLE OF CONTLNTS

Section	Page
FACT SHEET	ז
PREFACE	5
LIST OF ILLUSTRATIONS	13
LIST OF TABLES	15
1 OVERVIEW	17
Introduction	17
Report Organization	19
Nuclear lests and Radiation Exposures	24
Effects Experiments	27
Environmental Reasurements	27
Systems Response Experiments	28
Warshall Islands Setting	28
Special Problems in the CROSSROADS Tests	31
Joint Task Force One	32
Task Group 1.1 (Technical Group)	32
Task Group 1.2 (Target Vessel Group)	34
Task Group 1.3 (Transport Group)	36
Task Group 1.4 (Army Ground Group)	36
Task Group 1.5 (Army Air Group)	37
Task Unit 1.5.1 (Tactical Operations Unit)	37
Task Unit 1.5.2 (Army Air Photographic Unit)	39
Task Unit 1.5.3 (Instrumentation and Test Requirements Unit)	39
Task Unit 1.5.4 (Air Transport Unit)	39
Task Unit 1.5.5 [Air Service Unit]	39
Task Unit 1.5.7 (Army Air Weather Reconnaissance Unit)	39
Task Unit 1.5.8 (Air Orientation Unit)	40
Task Unit 1.5.9 (Air-Sea Rescue Unit)	40
Task Unit 1.5.10 (Neadquarters, Air Unit)	40

TABLE OF CONTENTS (Condinued)

Chapter	<u>Page</u>
2 (cont) Task Group 1.6 (Navy Air Group)	40
Task Group 1.7 (Destroyer Surface Patrol Group)	41
ïask Group 1.8 (Service Group)	
Post-Operation Organization and Activities	43
2 RADIOLOGICAL SAFETY	44
Planning	44
Radiological Safety Responsibility and Organization	45
Personne) Protection	47
Tolerance Exposure	47
film Badges	46
Radiological Safety Instruments	49
Personnel Decontamination	50
Uning Testing	51
Eye Protection	51
Exclusion Areas and Operations Limits	\$2
Surface Operations	52
Aerial Operations	52
Staffing and Training	53
Selection of Personnel	53
Bikini Activities	54
Continuing Need for Radiological Safety Personnel	55
Oceanographic Survey	58
Weather Prediction	59
Radiological Safety Preparations for BAKER	60
3 CROSSROADS CKPERIMENTAL PROGRAM	63
Introduction	63
Effects on Military Equipment	63
Army Ground Group	66
Bureau of Aeronautics Group	67
Bureau of Ships Group	67
Bureau of Ordnance Group	68
Hedical Group	68

· ·

TABLE OF CONTENTS (Continued)

<u>Chapter</u>		Page
3 (cont	) Electronics Group	69
	Army Ale Group (Task Group 1.5)	70
	Nuclear Weapon Phenomena	70
	Program I Bomb Preparation	75
	Program II Blast, Pressure, and Shock	75
	Program III Wave Motion Oceanography	76
	Program IV Propagation of Electromagnetic Waves	76
	Program V Radiological Safety	77
	Program VI Radiometry	77
	Program VII Radiation Measurements	78
	Program VIII Remote Measurements	<b>B</b> )
	Program 1X Technical Photography	81
4 т	EST OPERATIONS	63
	Pre-Test Operations	63
	ABLE Operations	85
	Preparation for BAKER	93
	BAKER Test	97
	OST-BAKER OPERATIONS: BIKINI, KWAJALEIN, AND THE NITED STATES	109
	Remanning Lightly Contaminated Target Ships at Bikini	109
	Decontamination of Heavily Conlaminated Target Vessels at Bikini	110
	Washdown of Target Ships	110
	Early Experiments in Decontamination	110
	Radiological Safety Considerations Buring Decombamination	113
	Decontamination Operations	115
	Discovery of Plutonium Contamination	116
	Cessation of Bikini Deconlamination Efforts	120
	Target Vessel Operations at Kwajalein	121
	Target Ship Activities After Joint Task Force 1 Bissolution	126

TABLE OF CONTENIS (Continued)

Chapler	<u>Page</u>
5 (cont) Contamination of Support Ships	128
Decontamination at Bikini	129
Shift to Kwajalein	130
Commander Joint Task Force 1 Letter of 19 August 1946	130
Radiological Clearance of Montarget Ships	131
Decontamination Experiments at San Francisco Naval Shipyard	133
Question of Clearance Standards	134
Clearance Standards Adopted	137
Activities at Other Shipyards	139
Disposal of Sand and Acid in Decontamination	142
6 BIKINI SCIENTIFIC RESURVEY	144
Background	144
Task Group 10.12	345
Preparalions	147
Operations	150
Other Units and Personne)	153
Rollup Operations	154
Personnel Exposure Levels	157
Resurvey Conclusions	158
7 U.S. ARMY GROUND FORCES PARTICIPATION	160
Introduction	160
Task Group 1.4 (Army Ground Group)	160
Task Unit 7.4.1 (Engineer Unit)	161
Task Unit 1.4.2 (Signal Unit)	161
Task Unit 1.4.3 (Ordnance Unit)	161
Task Unit 1.4.4 [Chemical Unit]	162
Task Unit 1.4.5 (Quartermaster Unit)	162
Task Unit 1.4.6 (Air Unit)	163
8 SUMMARY OF U.S. ARMY AIR FORCES PARTICIPATION	164
Headquarters Task Group 1.5	168
Task Unit 1.5.1 (Tactical Operations Unit)	168

TABLE OF CONTENTS (Continued)

<u>Chapter</u>	Page
8 (cont) Task Unit 1.5.2 (Army Air Photographic Unit)	168
lask Unit 1.5.3 (Instrumentation and lest	
Requirements Unil)	169
Task Unit 1.5.4 (Air Transport Unit)	159
Task Unit 1.5.5 (Air Service Unit)	169
Task Unit 1.5.6 (Army Drone Unit)	169
Task Unit 1.5.7 (Army Air Weather Reconnaissance Unit)	170
Task Unit 1.5.8 (Air Orientation Unit)	130
Task Unit 1.5.9 (Air-Sea Rescue Unit)	130
Others	131
9 U.S. NAVY PARTICIPATION	172
Joint Task Force 1 Staff	188
Dispatch Boat and Boat Pool	188
Divers	189
Underwater Demolition Team 3 (UDI-3)	190
53rd Naval Construction Battalion (53rd NCB)	190
Construction Battalion Detachment (156	191
Transient Ships	191
Navy Air Group (Task Group 1.6)	192
Task Unit 1.6.1 (Drone Carrier Unit)	192
Shot ABLE	194
Shot BAKER	195
Task Unit 1.6.2 (Pholographic Carrier Unit)	197
Shot ABLE	198
Shot BAKER	199
Task Unit 1.6.3 (Seaplane Unit)	200
Shot ABLE	501
Shot BAKER	203
Task Unit 1.6.4 (Seaplane Tender Unit Bikini)	205
Shot ABLE	205
Shot BAKER	205
Other Navy Air Groups	205

TABLE OF CONTENIS (Continued)

<u>Chapter</u>		Page
10	U.S. MARINE CORPS PARTICIPATION	205
n	PARFICIPATION OF OTHER GOVERNMENT AGENCIES. CONTRACTING FIRMS, AND UNIVERSITIES	208
	Government Agencies	208
	Contractors, Universities, and Other Domestic Organizations	213
	Observers	214
12	PERSONNEL EXEOSURES	216
	F11m Badge Dostmetry Program	216
	Badge-Recorded Exposures After ABLE	217
	Badge-Recorded Exposures After BAKER	218
	Badge-Recorded Exposures at Kwajalein	278
	Summary of Personnel with the Highest Badged Exposures for 1946	220
	Badge-Recorded Exposures After 1946 Related to CROSSROADS	226
	Personnel Exposures not Recorded on F11m Badges	227
	Dose Reconstruction	553
	Reconstruction Model	227
	Reconstruction Results	230
	Contemporary Evaluations of the Radiological Safety Program	230
REFERENC	CES AND BIBLIOGRAPHY	239
APPENDID	(E S	Page
A	SUMMARIES OF PARTICIPATING SHIPS' ACTIVITIES	261
в	RADFOLOGICAL SAFETY DOCUMENTS	449
С	INSTRUMENTATION DEVISION PROJECTS	505
Đ	ISLAND SYNONYMS	513
E	GLOSSARY OF TERMS	519
F	RADIATION READINGS ABOARD TARGET VESSELS	531
G	SAMPLE TARGET SHIP CREW DOSE RECONSTRUCTION	539

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# LISE OF ILLUSTRATIONS

Frontispiece: BAKER Emerges from Bikini Lagoon Amid Target Fleet

figure		<u>Page</u>
1	The Central Pacific.	20
2	Sixini Aloil, 1946, showing ABLE and BAKER test siles.	21
3	Navy Contruction Battalion personnel, assisted by Marshallese, construct wooden house frames on Rongerik for Bikinians.	22
4	Bikinians collecting their belongings for move to Rongerik.	22
5	Bikini outrigger swung aboard LSY for transport to Rongerik.	23
6	USS LST-1108 arrives at Rongerik, 8 March 1946.	23
7	Erection of photo lowers on Bikini, prior to CROSSROADS, 1946.	30
8	Bikini recreation area during CROSSRDADS.	31
9	Joint Task force 1 organization, Operation CROSSROADS.	33
10	Task Group 1.4 organization, Operation CROSSROADS.	37
11	Task Group 1.5 organization, Operation CROSSRDADS.	39
12	Organization of the Radiological Safety Section, CROSSRDADS.	46
13	Organization of Ship Material and Inspection Division. Operation CROSSROADS.	64
14	Armored vehicles and other Army equipment aboard <u>USS_Saratoga</u> (CV-3), ready for exposure to atom bomb, CROSSROADS.	56
15	Goats in exposure position on target ship deck during CROSSROADS.	69
16	Instrumentation Division (administrative organization), CROSSROADS,	72
17	Instrumentation Division (function $\epsilon^+$ organization), CROSSROADS.	73
18	Air sampling gas bag and drone B-17 at Enewetak Island following shot ABLE, CROSSROADS.	79
19	Removal of filter papers from F6F filter units at Rol-Namur Island following shot ABLE, CROSSROADS.	60
20	Orone boat being washed down before radioactive water sample is removed, CROSSROADS.	64
21	CROSSROADS, ABLE target array in Bikini Lagoon.	85
22	"Dave's Oream," the 8-29 from which the CROSSROADS, ABLE weapon was dropped.	87

LIST OF (LLUSTRATIONS (Continued)

figure		<u>Page</u>
23	EROSSROADS, ABLE target ship locations.	90
24	CROSSROADS Test ABLE cloud.	91
25	V19s and Commander Joint Task Force 1 inspect <u>USS New York</u> (BB-34) following Test ABLE.	94
26	Damaged <u>USS Skate</u> (SS-305) on 3 July following Test ABLE.	95
27	Inspection of Army vehicle on deck of <u>USS Nevada</u> (88-36) following Test ABLE, CROSSROADS.	96
28	Target ship locations for CROSSROADS, Test BAKER.	100
29	CROSSROADS, Test BAKER at about 10 seconds, photographed by remote-control camera on Enew Island.	102
30	CROSSROADS, BAKER cloud as viewed from the manned support ships in their operating areas.	102
31	USS Saratoga (CV-3) sloks following CR05SR0ADS, Test BAKER.	105
32	Welder aboard <u>USS Hughes</u> (DD-410) during preparations for towing it after CROSSROADS.	106
33	Monitor amidship on <u>USS Pensacola</u> (CA-24) after CROSSROADS. BAKER.	107
34	<u>USS Achomaw1</u> (ATF-148) spraying <u>USS New York</u> (BB-34) with saltwater after BAKER, CROSSROADS.	111
35	<u>USS Hughes</u> (OD-410) beached off Enew Island, covered with foamite following BAKER, CROSSROADS.	111
36	Work crews scrubbing down an unidentified target submarine, CROSSROADS.	112
37	Work crews use a firehose on the superstructure of an unidenlified target ship, CROSSROADS.	113
38	(nspection of <u>USS Hughes</u> (DD-410) at Puget Sound Naval Shipyard in 1948 showing workers wearing protective shoc covers and gloves.	129
<b>A</b> .1	Bikini anchorages and target ship area, CROSSROADS.	264
A.2	Target area patrol sectors and ship operating areas for CROSSROADS.	265
G.1	CROSSROADS ships' crew dose reconstruction methodology.	539
Ġ.Ż	Gamma radiation intensity aboard <u>USS independence</u> (CVL-22) following Tesi BAKER, CROSSROADS.	542
G. 3	Nomogram for reconstruction of dose for personnel returning from Bikini after CROSSROADS.	545

# LIST OF TABLES

Table		<u>Page</u>
1	lask Group 1.2 (Targel Vessel Group) ships participating in CROSSRGADS.	35
2	Army aircraft, CROSSROADS.	38
3	Basic intensive courses for CROSSROABS radiological safety monitors,	56
4	Ship Material and Inspection Division personnel exposures, CROSSROADS,	65
5	Instrumentation Division programs and responsible group, CROSSROADS.	73
6	Instrumentation Division personnel exposures, CROSSRGADS.	74
7	Aircraft participation, Test ABLE, CROSSROADS.	88
8	CROSSROADS. Test ABLE alreraft orbit points.	89
9	Aircraft participation, CROSSROADS, Test BAKER.	98
10	CROSSROADS, Test BAKER aircraft orbit points.	99
11	Target ships sunk at CROSSROADS.	103
12	Participating Army Air Forces units, Operation CROSSROADS.	165
13	U.S. Army Air forces personnel exposure, CRGSSR0ADS.	167
14	CROSSROADS larget vessels and lheir disposition.	173
15	CROSSROADS support ships and decontamination locations.	178
16	Units in Task Group 1.6, CROSSROADS.	193
17	Provisional and U.S. Marine Corps detachments aboard CROSSROADS vessels.	207
18	CROSSROADS observers.	215
19	Badge issues and exposures following Test ABLE, CROSSROADS.	217
20	CROSSROADS badging after Test BAKER.	219
21	Summary of film badge data for radiation safety monitors, CROSSROADS.	221
22	Film badge summaries for air unit personnel, CROSSROADS.	222
23	Film badge summary of radiological patrol boat crews, CROS\$ROAD\$.	252
24	Post-BAKER film badge summary for <u>USS New York</u> (88-34) boarding parties.	223
25	Post-BAKER film badge summary for <u>USS Pennsylvania</u> (00-30) reboarding parties.	223

LIST OF TABLES (Continued)

1 <u>30</u> ]6		<u>Page</u>
59	Post-BAKER film badge summary for <u>USS Salt Lake City</u> (CA-25) reboarding parties.	224
27	Summary of Joint lask force i initial boarding team film badge readings.	225
28	Dosimetry for military and civilian personnel at San Francisco Naval Shipyard for 1947 and 1948.	226
29	Number of ships and personnel reentering Bikini Lagoon after Test BAKER.	228
30	Ship and unit missions and involvement with target ship decontamination and inspection after Test BAXER, CROSSROADS.	229
31	Reconstructed (calculated) dose for support ship crews, CROSSROADS.	231
32	Reconstructed (calculated) dose for target ship crews, CROSSROADS.	235
A. 1	U <u>SS Butte</u> (APA-60) decontamination.	296
A.2	USS Carteret (APA-70) radiation readings.	300
A.3	Radiological readings, <u>USS Conyngham</u> (80-37) (31 July through 7 August).	310
A.4	<u>USS Gasconade</u> (APA-85) radiation readings.	331
A.5	Decontamination results on <u>USS New York</u> (B8-34) forecastle.	367
Α,6	Decontamination results on <u>USS New York</u> ( <b>88</b> -34) topside main deck aft.	368
A.7	Number of men decontaminating <u>USS Parche</u> (SS-384) between 6 and 21 August and their lengths of time aboard.	375
A.8	Topside shipboard contamination aboard <u>USS Parche</u> (SS-384).	375
A.9	Geiger readings aboard <u>USS Pennsylvania</u> (B8-30) by ship's company the first day of reboarding {8 August 1946).	377
A.10	Radiation readings aboard <u>Prinz Eugen</u> main deck.	393
A.11	lopside radiological readings on <u>USS Searaven</u> (SS-196).	411
A.12	Radiological readings aboard <u>USS Skate</u> (SS-305).	420
A.13	Geiger readings aboard <u>USS Tuna</u> (SS-203).	432
A.14	Representative Geiger readings on reboarding <u>USS Milson</u> (DD-408), 7 August 1946.	443
6.1	USS Independence (CVL-22) post-ABLE reboardings.	541
6.2	Post-BAKER reboarding dose reconstruction, <u>USS independence</u> (CVL-22) crew.	543

# CHAPTER 1 OVERVIEW

#### INTRODUCTION

After the atomic bomb attacks on Japan had abruptly ended World War II, many military leaders felt that military science was at a crossroads. The officer who commanded the first postwar nuclear test series commented that "warfare, perhaps civilization itself, had been brought to a turning point by this revolutionary weapon" (Reference C.12.1, Cap. Plate XI). With this in mind, he therefore had the nuclear test operation designated CROSSROADS, Operation CROSSROADS was at that time the largest U.S. peacetime military operation ever conducted. It involved 42,000 personnel, 251 ships, and 156 aircraft.

This series consisted of two detonations at Bikini Atoli in the Marshall Islands during the summer of 1946. These were:

- ABLE (1 July 1946, 0900) -- an airdrop detonated at an altitude of 520 feet (158 meters)
- BAKER (25 July 1946, 0835) -- an underwater shot 90 feet (27 meters) below the surface

An additional deep underwater detonation. Test CHARLIE, was planned but was not conducted.

This report documents the participation of War and Navy Department\* personnel who were active in the test series. Its purpose is to bring together available information about the atmospheric nuclear tests series pertinent to the exposure of both uniformed and civilian personnel to radiation. The report lists the organizations represented and describes their activities. It discusses the potential radiation exposure of personnel. Finally, it presents the exposures of participating personnel recorded by film badges and scientifically based estimates of radiation doses for participating units.

The weapons used in the CROSSROADS tests were of the same design as the one that had been dropped on Nagasaki, Japan. Each had a yield of 23 KT (the equivalent of 23.000 tons of TNT). This weapon type had been developed by the U.S. Atmy's Manhattan Engineer District during the war, primarily at the District's laboratory at Los Alamos. New Mexico. With research support from laboratories at the University of Chicago and Oak Ridge. Tennessee, and material production from Hanford, Washington. Under the terms of the Alomic Energy Act of 1946, the Manhattan Engineer District was dissolved at the end

In 1947 the War Department was dissolved. Jurisdiction over the ground components of the Army became the function of the newly created Department of the Army. and the new Department of the Air Force was established to direct the former Army Air Forces. These two new departments and the Department of the Navy formed the new Department of Defense.

of 1946, and its contracts, facilities, and management responsibilities were transferred to the newly established Atomic Energy Commission (ABC).

The primary purpose of CROSSROADS was to determine the effects of atomic bombs upon naval vessels. The effects of nuclear weapons on ships was of considerable interest to the U.S. defense establishment. As early as August 1945, the Chairman of the Senate's Special Committee on Atomic Energy proposed that the effectiveness of atomic bombs be demonstrated on captured Japanese ships. In September, the Army Air Forces commanding general put the question of such a test before the Joint Chiefs of Staff (JCS) (Reference A.L. p. 10).

The Navy's response to this proposal was that such a test also should include a few modern U.S. naval units in the target array (Reference A.L. p. 10). In effect, this broadened the test from a mere demonstration of the power of nuclear detonations to a scientific test whose results could be used in designs of naval vessels and naval tactics. In November the JCS established a subcommittee to prepare a detailed proposal. The subcommittee completed its work in 6 weeks.

Secondary purposes of CROSSROADS were to afford training for Army Air Forces personnel in attack techniques using atomic bombs against ships, and to determine atomic bomb effects upon military equipment and installations. Such information was not available from the Trinity test or the Hiroshima and Nagasaki bombings (Reference C.9.189, p. XIII).

On 10 December 1945, the President announced that the United States would Further explore the capabilities of atomic energy in the form of scientific atomic bomb tests under JCS jurisdiction. The JCS proposed a joint task force to be composed of Army and Navy personnel and civilian scientists, and on 10 January 1946 the President approved the formation of this task force. On 11 January the JCS created Joint Task Force One (JTF 1) and approved a naval officer who had commanded large Army-Navy operations in the Pacific during the war and who also had been Chief of the Navy's Bureau of Ordnance to serve as Commander JTF 1 (CJTF 1).

CROSSROADS, as proposed, was to have consisted of three nuclear events. In approving the plans, the President approved the detonation of three nuclear weapons, one-third of the U.S. stockpile at the time -- surely a measure of the importance given the operation (Reference A.7).

Among the major problems confronting CJTF 1 after his appointment was the selection of a test site. Saveral locations were considered in the Atlantic and Pacific oceans and in the Caribbean Sea. The requirements were:

- A protected anchorage (at least 6 nm1 [11 km] wide) to hold the target and support fleet
- A site that was nearly uninhabited
- A location at least 300 statute miles (about 483 km) from a city
- Freedom from severe cold and violent storms

- Predictable winds directionally uniform at all altitudes from sea level to 60,000 feet (18 km)
- Predictable water currents of great lateral and vertical dispersion: fast currents avoiding important fishing areas, ocean shipping lanes, and inhabited shores
- Control by the United States.

The location that best satisfied these requirements was Bikini Atoli. Bikini's location in the Central Pacific is shown in Figure 1 and a map of the atoli itself in Figure 2. The final choice of Bikini was announced on 24 January 1946 by the JCS after a slight delay because the fishing industry feared the tests might kill millions of fish, especially tuna and whales. To evaluate any dangers, the Department of Interior's Fish and Wildlife Service conducted surveys. Those surveys concluded that Bikini was not a ctitical area for tuna fish or other fish of commercial importance and was far from migratory whale routes (Reference A.i. pp. 19 and 20).

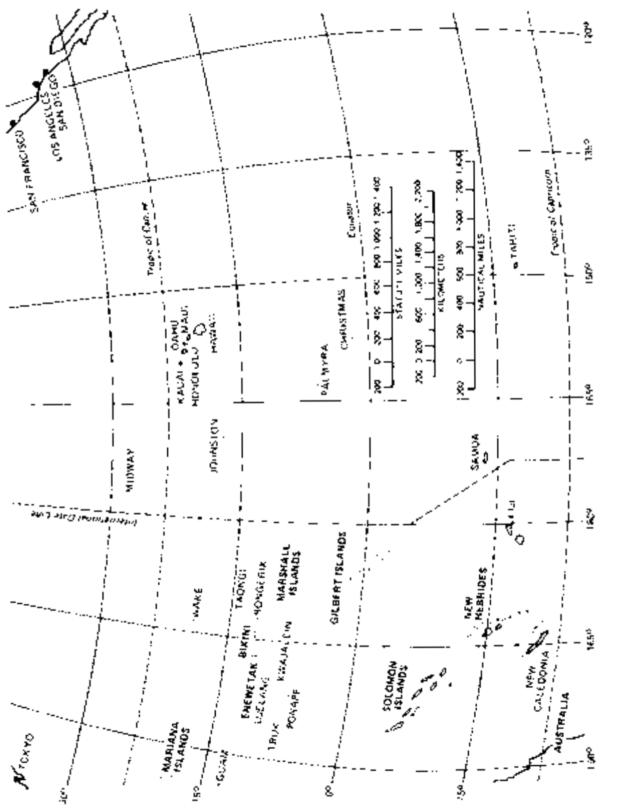
COTE 1 requested that the Bikini native population be evacuated from the atoll by 15 March 1946. Rongerik Atoll was selected as the future home for the Bikinians and on 26 February a group of Navy Construction Battalion personnel (Seabees) began construction of cisterns, water catchments, and 26 house frames there. These frames (Figure 3) were temporarily covered with canvas, but this was replaced by thatch from the pandanus, or screw pine, tree. The thatch was brought to Rongerik by the Bikinians. The cisterns were initially filled with 25,000 gallons (94,785 liters) of water brought from Kwajalein.

Bikini was evacuated on 7 March. Figure 4 shows the Bikinians collecting their belongings, and Figure 5 shows the loading of the LST that transported them. The 167 Bikinians arrived at Rongerik the next day (Figure 6). In an effort to improve the lives of the Bikinians who were unhappy with Rongerik, meetings were held in 1946 and 1947 between the Chief and members of his council and military authorities to Find a more suitable island. On 3 November 1948, the Bikinians and their possessions were resettled on the island of Xili, in the southern Marshall Islands, 400 pmi (741 km) southeast of Bikini and 27 nmi (50 km) southeast of Jaluit Atoll (Reference A.8, pp. 507-551).

On 23 March, after preparations for the operation were well underway, the President changed the date of the first test from 15 May to 1 July: the second test was scheduled for 25 July. This allowed certain members of Congress to observe Operation CROSSROADS. On 7 September 1946, the President announced that Test CHARLIE, the third scheduled and a deep underwater test, was indefinitely postponed (Reference C.9.206, p. V-(D)-5). Engineering problems in constructing a bathysphere capable of withstanding the teemendous pressures involved precluded the scheduling of Test CHARLIE before Spring of 1947 (Reference C.9.206, p. V-(A)-5).

#### REPORT ORGANIZATION

Subsequent sections of this overview chapter discuss the form of weapon effects test programs, with emphasis on potential radiation exposure of participating Mavy and War Department porsonnel. The chapter concludes with a description of JTF 1 and indicates how elements within JTF 1 functioned.





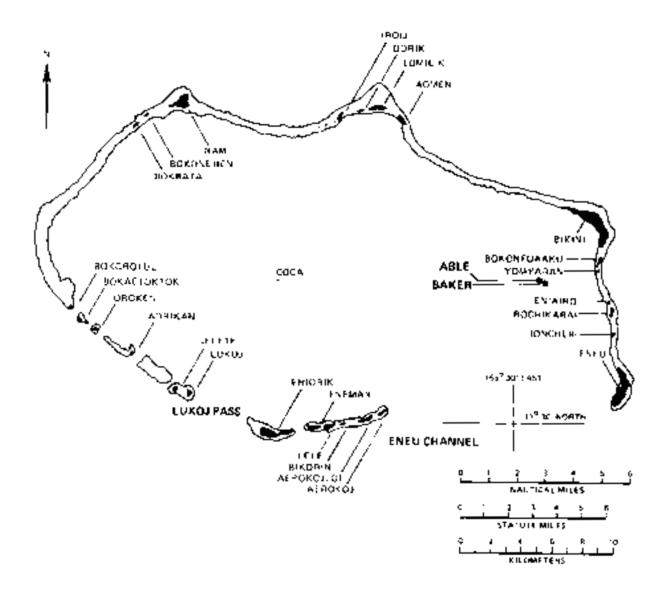


Figure 2. Bikini Atoli, 1946, showing ABLE and BAKER test sites.



Figure 3. Navy Construction Battalion personnel, assisted by Marshallese, construct wooden house frames on Rongerik for Bikinians.



Figure 4. Bikinians collecting their belongings for move to Rongerik.



Figure 5. Bikini outrigger swung aboard LST for transport to Rongerik.



Figure 6. USS LST-1108 arrives at Rongerik, 8 March 1946.

Chapter 2 is concerned with radiological safety (radsafe) aspects of the tests. This chapter documents procedures, training, and equipment used to pro-.ect part.cipants from potential radiation exposure.

Chapter 3 discusses the general role of personnel in the weapon effects program in CROSSROADS. Leading to a discussion of operations for test events in Chapter 4. and in the post-test operations discussed in Chapters 5 and 6.

Chapters 7 through 10 report participation by the Army Ground Forces. Army Air Forces. Navy. and Marine Corps. respectively. Chapter 11 summarizes participation of other government agencies. contractors. and universities. Personnel exposures are discussed in Chapter 12.

## NUCLEAR TESTS AND RADIATION EXPOSURES

In general, nuclear testing before 1961 consisted of the unconfined detonation of nuclear devices (usually not weapons) in the atmosphere. The devices might be placed on a platform or a barge on the ocean's surface; emplaced on or slightly beneath the Earth's surface: atop a tower: or supported by a balicon, dropped from an airplane, suspended underwater, or fired from cannon or rocket launchers, CROSSROADS employed two operational weapons: one was dropped from an aircraft and detonated in the air; the other was suspended from a ship and detonated underwater.

In theory, personnel can be exposed either to the radiation emitted at the time of explosion and for about 1 minute thereafter -- usually referred to as initial radiation -- or the radiation emitted later (residual radiation). Initial radiation is part of the violent nuclear explosion process itself.

The neutron component of initial radiation indirectly contributes to the later exposure of personnel. Neutrons are emitted in large numbers by nuclear weapon detonations. They have the property of altering certain nonradioactive materials so that they become radioactive. This process, called activation, works on sodium, slitcon, calcium, manganese, and iron, as well as other common materials. Activation products thus formed are added to the inventory of the radioactive products produced in the explosion process. The radiation emitted by this inventory more than 1 minute after detonation is referred to as residual radiation.

The potential for personnel exposure to residual radiation was much greater than the potential for exposure to initial radiation. In the nuclear explosion process, fissioning atoms of the heavy elements, uranium and plutonium, split into lighter elements, called fission products, releasing energy. When the uranium and plutonium fission, they produce a variety of fission products. Different fission products have different half-lives. In general, the lighter fission products have half-lives that are shorter than the mother elements. The residual radiation produced by these products, given their shorter half-lives, is initially quite high. Nowever, over a period of time, the radioactivity diminishes. The decay of the original fission products produces other, lighter fission products that may (or may not) be radioactive themselves. The net result is that initial decay of fission products produces fairly high levels of radioactivity that dissipate over time. While a radioactive fission product theoretically continues to exist forever (albeit in diminishing amounts). a point is reached where it is practically undetectable.

Overall radioactivity of all the Eission products formed decays at a rate that is closely approximated by a rule that states that for each sevenfold increase in time the intensity of the radiation will decrease by a factor of ten. Thus, a radiation rate of i roentgen per hour (R/hr) at 1 hour after the detonation would be expected to be 0.1 R/hr after 7 hours and 0.01 R/hr after 49 hours. This rule seems to be valid for about 6 months following a nuclear detonation, after which the observed decay rate is somewhat faster than that predicted by this relationship. Activation products, in general, decay at a faster rate than the fission products.

Fission products and the activation products, along with unfissioned uranium or plutonium from the device, are radioactive components of the material in the debris cloud. This cloud and its fallout are the primary sources of potential exposure to residual radiation.

In a nuclear airburst, the central core of intensely hot material, or fireball, does not touch the surface. The bomb tesidues (including the fission products, the activation products resulting from neutron interaction with device materials, and unfissioned uranium and/or plutonium) are vaporized. These vapors condense as the fireball rises and cools, and the particles formed by the condensation are small and smoke-like. They are carried up with the cloud to the altitude at which its rise stops, usually called the cloud stabilization altitude. Spread of this material then depends on the winds and weather. If the detonation is of relatively low yield, the cloud stabilization altitude will be in the lower atmosphere and the material will act like dust and return to the Earth's surface in a matter of weeks. Essentially all debris from detonations with yields equivalent to kilotons of TNT will be down within 2 months (Reference A.9). Areas in which this fallout material will be deposited will appear on maps as bands following the wind's direction. Thus, airbursts result in less potential for residual radiation exposure to personnel at the testing area from the debris, although there may be some residual radiation fission products from rapid settling of large particles and short-lived radiation coming from activated surface materials under the burst (if the burst altitude is sufficiently low for neutrons to reach the surface).

Underwater nuclear deconations are muffled by the great mass of water that surrounds them. Initial nuclear radiation is absorbed by the water surrounding the device and the intense heat vaporizes the water near the burst. This forms a bubble beneath the surface of the water that expands as the energy released in the explosion works against the mass of water. This expansion continues until the energy is expended, at which point the bubble begins to collapse as it rises toward the surface. Depending upon the depth of the burst and the size of the bubble (which in turn depends on the detonation yield, or total energy released), the bubble may break the surface of the water near its fully expanded size or smaller. Some radioactive products (including activated salt) are vented into the air as the bubble breaks the surface, but most of the device debris and activation products remain trapped in the volume of water that collapses on the bubble. This volume of water is called the radioactive pool. When the burst is close enough to the bottom, as in the BAKER shot of CROSS-ROADS, an underwater crater may be formed, and the material excavated from it will be radioactive and contribute to the residual radiation inventory.

The primary source of personnel exposures from the BAK6R shot was not the radioactive pool of water, however, but from contact with the target ships, which had been bathed in the radioactively contaminated water, sand, and coral that rained down upon them from the cloud and from the radioactive mist (base surge) that colled out from the base of the underwater explosion column.

A nuclear explosion produces three types of radiation that posed a potential bazard to CROSSROADS participants: alpha, beta, and gamma radiation. When any of these encounters living tissue, it transfers some of its energy to the target atoms, tearing off some or all of their electrons. This leaves the atoms with a positive electrical charge. The process is called ionization. This tearing off of the electrons destroys the bonds holding together the complex molecules making up living tissue and leaves the tissue damaged to some extent. At low levels of radiation, the damage is minor and probably does not adversely affect the individual's health or longevity. At higher levels, the reverse is true.

Gamma rays are electromagnetic radiation, differing from the more familiar radio waves and x-rays in that they have higher frequency and shorter wavelength. They are produced in great quantities and with very high energy during a nuclear explosion. They are also given off during the decay of the radioactive isotopes produced by a nuclear explosion. They can travel long distances and can readily penetrate clothing and skin. Because the personnel conducting Operation CROSSROADS were miles from the two detonations, the gamma hazard to them came from radioactive isotopes left in the target area or carried from it by wind or tide or on the participating ships or planes or even on the bodies of the personnel themselves. The radiation detection instruments used during CROSSROADS readily detected gamma rays.

Beta particles are electrons. Like gamma rays, they are given off by a nuclear explosion or by the radioactive isotopes produced by the explosion. Unlike gamma rays, however, beta particles do not travel far and, except at high energies, are stopped by clothing or the outer layers of skin. They are a greater bazard if isotopes emitting them are taken into the body or are left in contact with skin for a long period. Beta radiation was measured fairly well by several types of safety instruments used during CROSSROADS.

Alpha particles are made up of two protons and two neutrons. With the addition of two electrons, each becomes a helium atom. Alpha particles are given off by some radioactive isotopes created in a nuclear explosion and by unfissioned uranium or plutonium. Because alpha particles are relatively massive, they do not travel far. about 1 or 2 inches in air. The skin, clothing, or even a piece of paper will stop them. However, if the material emitting them enters the body and lodges there, the alpha particles can do great harm because they cause a high rate of ionization. The decay time of many alpha emitters is long. Plutonium only loses half of its alpha particles in 24,000 years! As described in detail in Chapter 2, the safety instruments available at CROSSROADS for detecting alpha particles directly were few in number and would not operate outside the controlled conditions of the laboratory on the ship housing the radiation safety organization. Therefore, the only expedient way to estimate alpha radiation was to assume that some relatively stable ratio existed between alpha emitters and gamma or beta emitters. One could then measure gamma or beta radiation and calculate the alpha hazard. As beta and gamma radiation decreased, however, alpha radiation remained because of the long decay time of the plutonium and other alpha emitters.

## EFFECTS EXPERIMENTS

Central to the test series was the experimental program. This program and its requirements dictated the form of the test organization and the detail of personnel participation. CROSSROADS had two experimental programs. The first was to determine the effects of nuclear detonations on animals and on military equipment such as ships, aircraft, and various supplies. The second program was to measure weapon phenomena such as heat, blast, radiation, and wave action. CROSSROADS was not a weapon development operation; the bombs used were of the same design as the one dropped on Nagasaki.

Effects experiments were intended to acquire urgently needed military data. These experiments may be classed into two general kinds. The first class of measurements was made to document the hostile environment created by the nuclear detonation. The second class of effects experiments documented the response of systems to the hostile environment; these measurements are termed systems tesponse experiments.

## Environmenial Measurements

The purpose of environmental effects measurements was to gain a comprehensive view of the bostile environment created by a nuclear detonation to allow military planners to design survivable military hardware and systems and to train personnel to survive. Examples of environmental measurements taken at CROSSROADS include static (crushing) and dynamic (blast) pressure, heat generated by the detonation. and failout radiation. Measurement techniques employed for CROSSROADS varied with the effects being measured, but usually measuring devices were placed at a variety of ranges from surface zero and their measurements tecorded in some way. Many types of gauges and data-recording techniques were used. Measuring devices or instruments were airborne, underwater, on shore towers, or on a technical support vessel: the majority were placed on target vessels (Reference C.9.208, p. 2).

Rugged, self-recording gauges were developed for blast and thermal radiation measurements so that complete loss of data from a project would not occur if instrument recovery were delayed, for example, by heavy failout. For nuclear radiation measurements, however, early data recovery was still desirable as the gauges might be thin aluminum foil meters that could be made radioactive by the initial neutrons. Early observation was necessary before the information contained in the induced radiation pattern decayed to undetectable levels.

The potential for radiation exposure of personnel responsible for environmental measurements in general depended on the proximity of the instruments to the device and the time that elapsed between detonation and instrument recovery; the nearer in space or time to the detonation, the greater the potential for exposure.

#### Systems Response Experiments

To document the response of systems to the hostile environment, military hardware (aircraft parts, ammunition, radar, petroleum, tanks, field stoves, clothing, and medical equipment) was exposed to nuclear detonation effects. Techniques used for these experiments were conceptually simple: exposure of the system of interest and observation of its response. Actual conduct of the experiments was far more complex. The level of threat to which the system was exposed almost always required measurement to properly understand the response, necessitating an environmental experiment along with each systems response experiment. It was often not enough to know whether the system survived, but rather what the effects were on the component parts and their interactions. This required the placement of extensive instrumentation and recording devices throughout the test area.

While the potential radiological exposure of personnel during these systems response experiments was governed primarily by the proximity of personnel in space or time to the detonation, an additional problem arose. Often, when the exposed object was recovered for closer examination, it could be contaminated by device debris or even be radioactive itself due to neutron activation. Personnel recovering or handling such objects could be exposed to radiation. For this reason, reboarding parties who inspected vessels, aircraft, and equipment after each detonation were given published guidelines and radsafe instructions (see Appendix B).

#### MARSHALL ISLANDS SETTING

The Matshall Islands are in the easternmost part of the area known as Micronesia ("tiny islands"). The Matshalls are spread over 770 thousand mi<sup>2</sup> (2 million  $km^2$ ) of the Earth's surface, but of this area only about 70 mi<sup>2</sup> (180  $km^2$ ) is land. Two parallel chains form the islands: Ratak (or Sunrise) to the east, and Ralik (or Sunset) to the west; Bikini is in the Ralik chain at its northern extreme. Figure 1 shows these islands in the Central Pacific; Figure 2 is a map of Bikini Atoll.

A typical stoll. Bikini is a coral cap set on truncated, submerged volcanic peaks that rise to considerable heights from the ocean floor. It consists of 27 small islands that encircle a broad lagoon 25 miles (40.2 km) long and 15 miles (24.1 km) wide, with a maximum depth of about 200 feet (61 meters). The dry land area,  $2.72 \text{ ml}^2$  (7 km<sup>2</sup>), is covered with low, scrubby brush and coconut and pandanus trees. The land area is concentrated in the eastern islands, from Bikini to Eneu islands, which form about 53 percent of the land total, with 24 percent taken up by the southern section of Enidrik to Aerokoj.

Climate is tropical marine, generally warm and humid. Temperature changes are slight, ranging from  $70^{\circ}$  to  $90^{\circ}$ F (21° to  $32^{\circ}$ C). Rainfall is moderate, and prolonged droughts may occur. North of the atoll is open ocean for a thousand miles, the only inhabited island being Wake. East of Bikini are

several atol)s, with Rongelap at 80 nmi (148 km) the closest. Storms are infrequent, although typhoons occur: nevertheless, both wind and sea are continuous erosional agents. Although possible at any time, most tropical storms occur from September to December. Cumulus clouds are abundant in the area.

The Bikini region incorporates three basic wind systems. Northeast trade winds extend from the surface to 25.000 to 30.000 feet (7.6 to 9.1 km). upper westerlies from the top of the trades to the base of the tropopause at 55.000 to 60.000 feet (16.8 to 18.3 km), and Krakatoa easterlies from the tropopause up into the stratosphere. These systems are all basically east-to-west or westto-east air currents. Day-to-day changes reflect relatively small north-south components, which are markedly variable. Greatest variation occurs in the upper westerlies, particularly during late summer and fall.

Steady northeast trade winds in the lower levels cause water at the surface of the lagoon to flow from northeast to southwest, where it sinks to the bottom and returns along the lower levels of the lagoon, rises to the surface along the eastern arc of the reefs and islands, and is moved by winds to the Southwest again. Lagoon waters moving in this closed loop also mix with those of the open ocean, resulting in a flushing action.

At Bikini, ocean water flows in over northern and eastern reefs and flows out of the western portion of Eneu Channel. Water exchanges over the western reefs with the flowing out with the ebb. The net rate of flushing of Bikini waters is such that one-half of the lagoon waters is replaced by ocean water in 22 days and the original volume will account for only 10 percent of the lagoon volume after 2-1/2 months (Reference C.9.209, p. F-25).

During CROSSROADS, the Marshall Islands were under the jurisdiction of a U.S. military governor who reported to the Chief of Naval Operations and ultimately to the Secretary of the Navy. Since July 1947 these islands have been part of the Trust Territory of the Pacific Islands, a strategic area trusteeship of the United Nations, administered by the United States (Reference A.S. pp. 507-551).

In order to prepare Bikini Atoll for test operations, a considerable amount of work was required in the lagoon and on the principal islands. First, it was necessary to clear the lagoon of Japanese mines. On 10 Match a survey unit arrived and began hydrographic and land surveys to augment the data recorded on the available Japanese charts. After the survey several coral heads were blasted out to permit safe navigation of large ships and to permit proper placement of ships in the proposed target arrays. Navigational and mooring buoys were laid in the lagoon and beacons placed on shore. On the islands, photographic towers (Figure 7), recording stations, recreational facilities (Figure 8), and landing facilities were constructed. This work was started on 20 March with the arrival of the 53rd Special Naval Construction Battalion, assisted by elements of the service groups and minesweeping units of the Parific Fleet (Reference C.9.206, p. V~(B)-4).

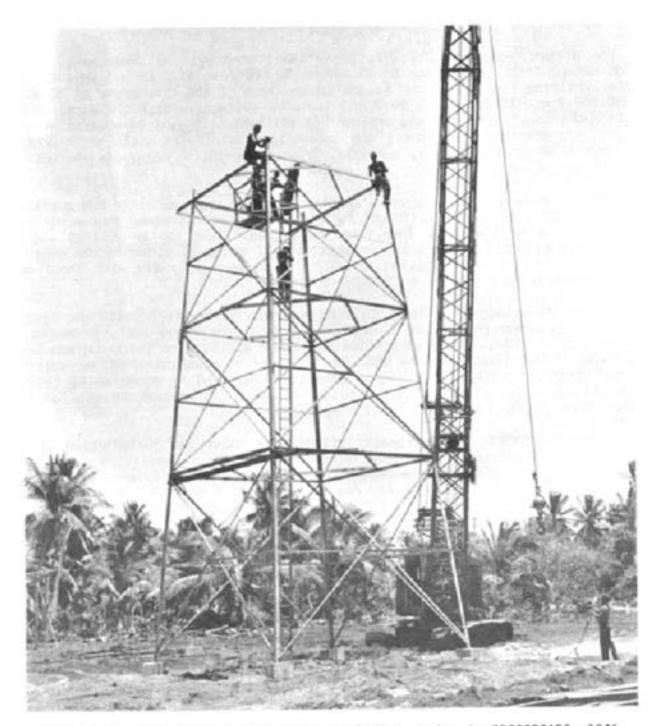


Figure 7. Erection of photo towers on Bikini, prior to CROSSROADS, 1946.



Figure 8. Bikini recreation area during CROSSROADS.

SPECIAL PROBLEMS IN THE CROSSROADS TESTS

The remoteness of Bikini Atoll posed significant logistics problems in procuring and transporting personnel, materials, and supplies to the new test site. Special security arrangements were also required to transport the nuclear weapons from the United States to the test area. However, there were many advantages to testing at Bikini. It offered a large, uninhabited area for test activities and normally steady directional winds to clear the airborne test debris.

Another major problem was design, procurement, and installation of the many scientific instruments required to measure effects of the detonations. These included instruments for observing shock waves, water pressure, airblast, wave action, deformation of structures, and radioactivity. Remotely controlled (drone) boats and aircraft had to be provided to obtain important measurements in radioactive zones without endangering personnel. Laboratories had to be installed on ships and on shore to repair instruments and carry out test analyses (Reference C.9.206, p. I-(B)-7).

In addition. CROSSROADS posed other problems (Reference A.1, pp. 20 through 23):

- Scientific resources were declining from wartime peaks.
- The number of nontechnical Service personnel was diminishing
- Civilian scientists participating from universities were insistent upon returning by early September
- Army and Navy budgets were expected to become smaller after the war
- Obsolete target vessels could not be held available indefinitely.

## JOINT TASK FORCE ONE

JTF 1 was organized on 11 January 1946. It followed the basic principles employed during World War II to develop amphibious task forces, but incorporated needs of the scientific program. The joint task force staff comprised Army. Navy, and civilian scientific personnel. This joint staff maintained liaison with the War and Navy Departments, the Manhattan Engineer District, and other government agencies.

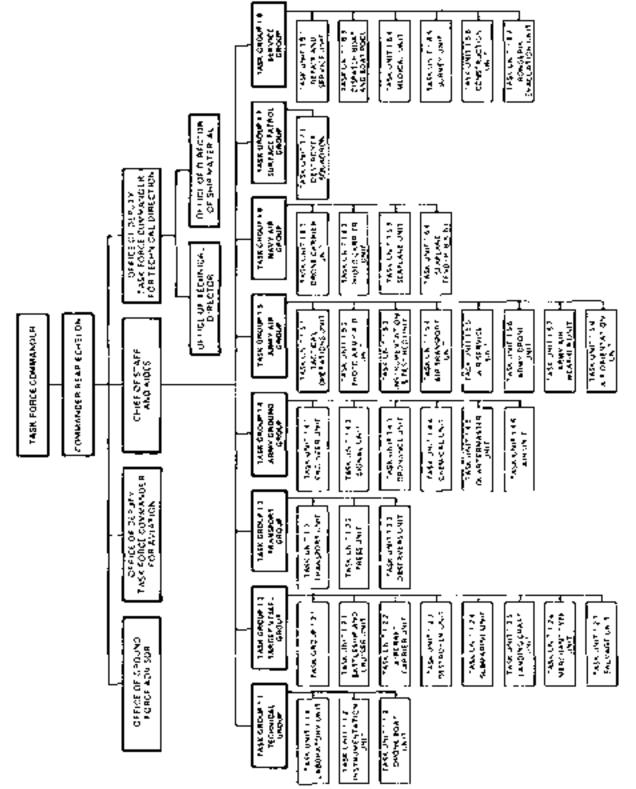
CJTP 1 maintained liaison with two boards of special interest, the JCS Evaluation Board and the President's Evaluation Commission. The Evaluation Board was to advise CJTF 1 during preparation for the tests and evaluate test results. The Evaluation Commission was to cooperate with the Wat and Navy Departments in conducting the tests, and to undertake a study of the tests and to submit its observations to the President along with findings, conclusions, and recommendations (Reference C.9.206, pp. VI-(B)-1 and VI-(B)-2).

JTF I was subdivided into eight task groups, each of which performed some specific function. Figure 9 details the structure of JTF 1, which was head quartered on USS Mount McKinley (AGC-7).

#### Jask Group 1.1 (Technical Group)

Task Group (TG) 1.1 was responsible for instrumenting all target ships and target areas. Selected ships assigned to the group were equipped with laboratory facilities to service scientific instruments and record all data. The primary mission of its Drone Boat Unit (Task Unit (TU) 1.1.3) was to obtain early samples of radioactive water after each test and conduct remotely controlled radiological reconnaissances of the lagoon area after shot BAKER. TG 1.1 also did the following:

- Operated and performed technical services.
- Observed and measured physical phenomena.
- Furnished technical advice and assistance.





TG 1.1 had the following three task units, listed below with the ships on which they were based.

- TU 1.1.1 (Laboratory Unit)
  - -- <u>OSS Albemarle</u> (AV-5) (Plagship)
  - LCT-1359
  - -- LSM-60 (BAKER surface zero vessel)
- TU 1.1.2 (Instrumentation Unit)
  - -- <u>USS Avery Island</u> (AG-76) USS Burleson (APA-67)
  - USS Cumberland Sound (AV-17)
  - -- U98 Haven (AH-12)
  - -- <u>OSS Kenneth Whiting</u> (AV-14)
  - -- USS Wharton (AP-7)
- TU 1.1.3 (Drone Boat Unit)
  - <u>USS Begor</u> (APD-127)

#### Task Group 1.2 (Target Vesse) Group)

- TG 1.2 did the following:
  - Prepared and placed target vessels for tests.
  - Salvaged and provided rescue assistance to damaged. strained, or distressed vessels
  - Evacuated ships at time of tests.
  - Furnished boats and boat crews to the boat pool.
  - Provided boats from target vessels for radsafe recommaissance and transport of initial inspection parties.

TG 1.2 was composed of seven task units during the testing period; their tespective ships are listed in Table 1. USS Fall River (CA-i3) was the flagship for TG 1.2. Not all TG 1.2 ships were target ships. although most were. Nontarget ships listed supported preparation. placement. and salvage of the targets. An eighth task unit. TU 1.2.12 (Kwajalein Maintenance Force), provided radiological decontamination and ammunition removal and disposal services for the JTF 1 ships moved from Bikini to Kwajalein during August and September 1946. Other activities included rollup of operations at Bikini, radiological survey of marine life around Wotho. Rongerik, and Rongelap islands, preparation of ships for movement to other shipyards, and ald in the training of radiological safety school graduates who had been sent to Kwajalein for practical experience. The unit initially consisted of about 1,500 men based ashore and on assorted small craft as well as the following vessels:

Sask Group 1-2	1454 Unit 1 2 1	1496 (Mol)) 6 2 4	lasr Umit 125	1246 8411	անդե Ատիէ 121
l'hegihiç	Des té éper Céni	Subcar Loc Unit	Landing Crait Usil	Merchant Type Unit	Sateaue Unit
1955 Fall Alver (CA-131)*	Betti oped Divisten ()	Submitte Division ())	LST Group 9 USS 551, 57	Fransport Givision 91	476-47 <sup>4</sup>
Task Units (1.2.)	USS Anderson (DD-461)	455 Sparaven (55 196)	užž 1 <u>7</u> 1 135	<u>USS Banger</u> (APA 60)	A FA - 160 <sup>4</sup>
Sattleship and Crubber	USS M <u>.ghe</u> y (DD-410)	<u>1955</u> Skate (55-304)	USS ( <u>51-133</u> USS ( <u>51-270</u>	<u>USS Brete</u> (APA 66)	314 192 <sup>4</sup>
Eatthering Division 2	lagship} USS Qancom	US <u>) Skiplack</u> (SS 888)	44 <u>4 158-545</u>	17 <u>55 (47)5539</u> (APA-62)	1955: Achan <u>awi</u> (ASI 148)
USS Arba <u>ns</u> as (88.33) If bagstife:	(00 367) USS Øhind	USS Tuna (53-201)	<u>4\$\$ (\$</u> 7-661 (() (2 ∞at 7	USS Carterel (APA-TS)	USS Chickyseve
Magato (captoles Japanese bateleship)	(DD 404)	Submit the	161 377	USS Fallon TAPA Bal	755 ()amp <sup>4</sup> (495-77)
155 Mey Tark (18-18)	Deskræger Úlvinien J USS Gelmb leibet	0161/100 112 05 <u>5 Apoyon</u> 255 1043	LCI-149 LCI-337	Fransport Plansbort	USS CONTER VER
BaltTeshig Olyision 9 U <u>SS Bes</u> ada (AB 36)	USS Galph 1g/bst 100 390:	(55-308) USS Benluda ASS-3155	LUI 120 (CI(:) <b>449</b>	USS Barrow	055 Cours <sup>1*</sup> (851 A)
USS Parangeventa (BM 30)  FRagsmip!	055 314 <u>54</u> (DD 406) 055 906000 1005	(13-315) <u>USS</u> Farche	(21,1) 615	LAPA-61  USS Butte  APA-68	9 <u>55 Cui</u> rent <sup>4</sup> 1875-223
Cruiter Officion 73	<u>uss</u> menove i <u>ons</u> (DD 419) (Llagshipi	(55-384) USS Philo1/153 (55-386)	LCI Group (% LLI 216	1999-1991 1995 <u>(or</u> lland 1996 141	155 0etteer*
USG Penyayola (CA 24) Prins fuger (captured	USS W11204 (DD 468)	(*) 100:	LCT 818 LCT 818	USS Crittenden ISPA TIJ	<u>1755 (Lian</u> * 1 Ww.795
German chulver) Sekane (captures	Bentfoger Division 3		101-1078	0 <u>55 00-0504</u> (APA. 191	055 Groin <sup>4</sup> /#120-13
Japanese crwiser) VSS Sal <u>l Labe j</u> il <u>y</u>	USS Conyngham (DD S21)		(TEAN)	1:udapar 5	LC1 581 LC1 746
(CA 251 (Flegisip)	<sup>6</sup> Mirzof N <u>220</u> 4Mac 400		161 2014 161-2415	6991100 93 USS 814040	107-1984
Task 0011 1 2.2	USS Muglord (DD-349)		LCI 1176 <sup>4</sup>	(APA-63) 455 Bracken	467-1420 <sup>4</sup> 1 <u>965</u> Bender
Alerrans Carries Unit	100-3497 11 <u>55 Mar</u> illa (00-143)		1010130" 101037"	LAPA 641 155 Briscow	(4#53.29 QSS Gneola <sup>#</sup>
Carrier Civision () USS Insegnmence (CVI-22)	Destroper		(C. 055*	LAPA 651 USS Eatron	(M. 85) 1955 : Patrixe
USS Saraloge (CV 3)	Division 4 USS Rayram		((1.125.p.2) ((1.167 <sup>6</sup>	(ÁPA II) USS F1lleure	(ARSE 1) 31
	(95 402) USS (*)00+		LCI 414 LCI 155	(APA.\$3) 1953 Genera	CIAS 0: USS Accitation <sup>4</sup>
	(VD 40);		101-517	LAPA-BET <u>Ess nigga</u> ta	(APS 42) 4 <u>155 Shakema</u> ure <sup>4</sup>
			167 1203	1494 611	( <b>11, 38</b> ) <u>455 (11, 54</u> )
			LC1 9/87 LC1 9737	Civitien 34 USS Appling <sup>4</sup>	raal 88) 555 Widgeon
			111 1246	CAPA SOL CSS Artemba <sup>4</sup>	(ASH-CY
			101 (20)*	CSS 41 40016 [AEA 21] USS Gat{ <u>otade</u>	
NOTES:			((1.)445"	1898 841	
Mondargel vessels			Phycel Langour		
Elwo PERTISH Coronado Kaapian	net were also repred	in the larget	APDE -13		
affey They wele not enabled	rd to any Lank unit		=0-160		
BARFR target only			TÚG 83		

# Table 1. Task Group 1.2 (Target Vessel Group) ships participating in CROSSROADS.

USS <u>Conserver</u> (ARS-39)	APL-27
<u>USS Current</u> (ARS-22)	LCI-329
US <u>8 Geneva</u> (APA-86)	LC1(L)-549
USS Haven (AH-12)	LCI(L)-615
	YF-753

Task Group 1.3 (Transport Group)

TG 1.3 transported personnel and equipment to Bikini Atoll as well as evacuating personnel of the Target Vessel Group. It also furnished boats and boat crews to the boat pool. supplied two AXAs and two LSTs for the construction unit. and transported and quartered the press and observers. This task group was composed of three task units: their respective ships are listed below.

TU 1.3.1 (Transport Group) Transport Division 31

USS Bayfield (APA-33)USS Ottawa (AKA-101)USS Bexar (APA-227)USS Rockbridge (APA-220)USS Bottineau (APA-235)USS Rockingham (APA-220)USS George Clymer (APA-235)USS Rockingham (APA-230)USS Henrico (APA-45)USS Rockingli (APA-230)USS LST-817USS Saint Croix (APA-231)USS LST-881USS Saint Croix (APA-231)

70 1.3.2 (Press Unit)

<u>USS Appelachian (AGC-1)</u>

TU 1.3.3 (Observer Unit) <u>USS Blue Bidge</u> (AGC-2)

USS Panamint (ACC-13)

An alphabetically arranged list of participating target and support ships. which includes a summary of their activities, forms Appendix A of this report.

Task Group 1.4 (Army Ground Group)

TG 1.4 was responsible for determining damage to selected Army equipment exposed at varying distances from the detonation point and measuring radii of effectiveness for each detonation. Each of the operating task units had Army equipment on certain ships and on Bikini Island for exposure to the nuclear detonations. Figure 10 shows the TC 1.4 organization. Each unit had inspection teams that were assigned to target ships and responsible for loading, securing, maintaining, and inspecting assigned test items. These teams also instructed crews of each target ship concerning exposed test items. Teams were to reboard

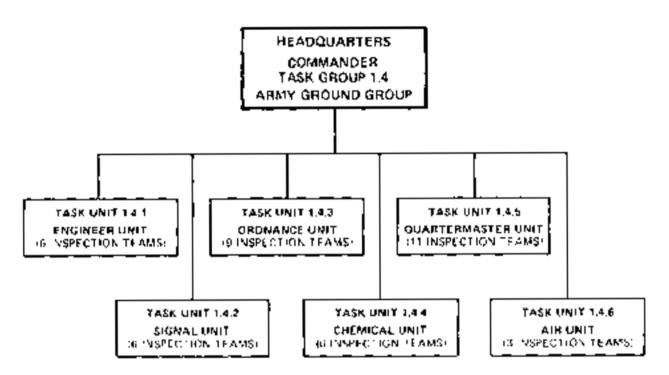


Figure 10. Task Group 1.4 organization, Operation CROSSROADS.

ships after the tests when ships were radiologically cleared and safe for boarding (Reference C.9.149, p. 3). TG 1.4 was composed of a headquarters and the following six operating task units:

- TU 1.4.1 (Engineer Unit)
- TU 1.4.2 (Signal Unit)
- TU 1.4.3 (Ordnance Unit)
- TU 1.4.4 (Chemical Unit)
- TU 1.4.5 (Quartermaster Unit)
- TU 1.4.6 (Air Unit).

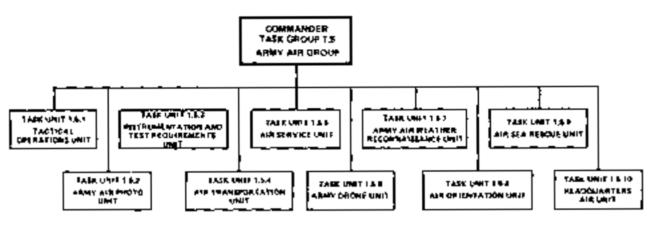
Task Group 1.5 (Army Air Group)

TG 1.5, the Army Air Group, composed of provisional Army Air Forces units, was assigned the mission of dropping the ABLE weapon on the target array in Bikini Lagoon. In addition, it furnished aircraft, facilities, and crews for photography, weather reconnaissance, air-sea rescue, cloud sampling, pressure gauge drops, and air transport. Table 2 lists the Army aircraft used during CROSSROADS. B-29s and F-13s, which were modified B-29s, have become intermingled at some points in the historical accounts of Army Air Group operations. The totals for each shown here are correct by most accounts. TG 1.5 was composed of the following 10 task units (as shown in Figure 11).

TASK UNIT 1.5.1 (TACTICAL OPERATIONS UNIT). TU 1.5.1 trained crews. prepared equipment for the tests. airdropped the test ABLE weapon. set up the air search radar in the Bikini area, and provided radar analyses of practice bomb

Task Unit	Туре	Quantity	Kission
1.5.1	B-29	1	E orama esd
	8-29	۱	8оть дгор
	8-29	2	Pressure gauge drop
	F-13 <sup>8</sup>	2	Radiological reconnaissance
	B-29	3	Spare
1.5.2	C-54	2	Photographic
	f-130	8	Photographic
1.5.3	8-17	10	Orone samplers
	B-17	6	Orone controllers
1.5.4	C - 46 <sup>C</sup>	20	Transport
	C-54 <sup>C</sup>	10	Transport
1.5.6	This of BAKER		ined with TV 1.5.3 before ABLE and
1.5.7	WB-29	3	Weather reconnaissance
1.5.8	B-29	2	Radio broadcast, press, observation
	C-54 <sup>đ</sup>		
1.5.9	B-17	2	Air-sea rescue
Notes:			·
<sup>a</sup> Borrowed <sup>b</sup> B-29s mod		.5.2. photography	
-	those use		upplies to and from the continental
6 Borrowed	from TU 1	.S.4 on shot	days.
			VII-E, Appendix II.

# Table 2. Army aircraft, CROSSROADS.



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Figure 11. Task Group 1.5 organization, Operation CROSSROADS.

runs. It also operated two B-29s that dropped pressure gauges during each test. In addition, after each detonation it tracked the radioactive clouds and sampled air around the clouds. The unit was based on Kwajalein Island.

TASK UNIT 1.5.2 (ARMY AIR PHOTOGRAPHIC UNIT). TO 1.5.2 conducted air photographic operations and furnished aircraft for radiological reconnaissance flights. It was stationed on Rwajalein Island.

TASK UNIT 1.5.3 (INSTRUMENTATION AND TEST REQUIREMENTS UNIT). TU 1.5.3 and TU 1.5.6 (Army Drone Unit) were combined before the operation began. It was responsible for providing the B-17 drone and B-17 drone-controller aircraft for cloud-sampling operations. The drone mission required that the unit provide and maintain special equipment for sampling and for drone control operations. This included special cameras mounted in the drones. This unit was located on Enewetak Island.

TASK UNIT 1.5.4 (AIR TRANSPORT UNIT). TU 1.5.4 provided airlift for personnel, supplies, and equipment between Roswell Army Air Field, New Mexico, and the Pacific Test Area. It also provided air shuttle service among Kwajalein. Bikini, and Enewetak islands. Both C-46s and C-54s were available. This unit, stationed on Kwajalein Island, was responsible to Assist in evacuating Enewetak Island in case of radiological danger to personnel on that island.

TASK UNIT 1.5.5 (AIR SERVICE UNIT). TU 1.5.5 serviced and maintained Army aircraft at Kwajalein Island. In addition to service and maintenance personnel, the task unit had engineers, military policemen, and weather-forecasting personnel.

TASK UNIT 1.5.7 (ARMY AIR MEATHER RECOMMAISSANCE UNIT). TU 1.5.7 had three MB-29 aircraft with crews trained in weather reconnaissance. It flew long-range weather reconnaissance missions before each test. This unit was located on Xwajalein Island.

TASK UNIT 1.5.8 (AIR ORIENTATION UNIT). 70 1.5.8, based on Kwajalein Island, was responsible for accommodating visitors, observers, the press, and news broadcasters. It flew these groups in two R-29s and two borrowed C-54s to witness CROSSROADS detonations.

TASK UNIT 1.5.9 (AIR-SEA RESCUE UNIT). TU 1.5.9 was initially part of TU 1.5.3 but was made a separate unit before testing started. It had two B-17 aircraft (called "Dumbos") for air-sea rescue and provided coverage between Enewetak and Bikin). The unit was based on Enewetak Island.

TASK UNIT 1.5.10 (NEADQUARTERS, AIR UNIT). TU 1.5.10 contained the command and staff elements of TG 1.5. It was based on Xwajalein Island and operated the task group headquarters. It was also known as Hq TG 1.5 (Reference B.5.1).

Task Group 1.6 (Navy Air Group)

TG 1.6 had three different functions: drone plane and drone boat control. aerial photography, and seaplane transportation. TG 1.6 was composed of four task units:

```
TU 1.6.1 (Drone Carrier Unit)
   TE 1.6.11
      <u>OS$ Shangr1-La</u> (CV-38)
   TE 1.5.12
      OSS Charles P. Cecil (OD-835)
      USS Forse (00-882)
      USS Newman K. Perry (DD-883)
      <u>USS Turner</u> (DD-834)
   TE 1.6.13 (Navy Field Recovery Subunit.
             NAB Roi-Namur, Kwajalein)
   TE 1.6.14
      Air Development Squadron 2 (VX-2)
TU 1.5.2 (Photo Carrier Unit)
   USS Saidor (CVE-117)
   Plane guard destroyers from TE 1.6.12 as assigned.
TU 1.6.3 (Seaplane Unit, NAB Ebeye Island, Kwajalein)
   Patrol Seeplane Squadron 32 (VFB-32)
   Air-Rescue Squadron 4 (VH-4)
   Carrier Mircraft Service Unit (Fleet) 34 (CASU[F]-34)
TU 1.6.4 (Seaplane Tender, Bikini)
   USS_Orca (AVP-49).
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<u>Shangri-La</u> carried drone alreraft and operated off Roi Island, Kwajalein, where an airfield was used for landing and experimenting with drone planes.

Between tests. <u>Saidor</u> operated from Bikini Lagoon with drone boat control and photographic unit personnel on board. Except on ABLE and BAKER days, <u>Orca</u> was stationed at Bikini as a terminal and service unit for transport seaplanes. The ship maintained seaplane runways and furnished overhaul servicing required for all planes on turn-around service (Reference C.9.206. p. V-B-10).

Task Group 1.7 (Destroyer Surface Patrol Group)

TG 1.7 performed the following tasks during CROSSROADS:

- Furnished radsafe patrols
- Anchored one ship at Bikini Atoli isgoon entrance, except when it was evacuated, and supplied arrival information to incoming vessels
- Advised the Senior Officer Present Afloat (SOPA) about each arrival and departure From Bikini Lagoon
- Deployed two destroyers to act as approach markers for the bombing aircraft in test ABLE.

TC 1.7 was composed of only one task unit. TU 1.7.1 (Destroyer Squadron Unit), and contained the following ships.

Destroyer Division 71

 USS\_Barton
 (DD-722)
 (Plagship)
 USS\_O'Brien
 (DD-725)

 USS\_Laffey
 (DD-724)
 USS\_Walke
 (DD-723)

 USS\_Lowry
 (DD-770)
 USS\_Walke
 (DD-723)

Destroyer Division 72

USS Allen M. Summer (DD-692)	<u>USS Moale</u> (DD-693)
USS Ingraham (DD-694)	USS_Robert K. Huntington (DD-781)

## Task Group 1.8 (Service Group)

This task group had the following responsibilities:

- Base facilities and services including repair. fuel, water, mail service (<u>USS\_LST-B61</u>): general supply. provisions. hospital, and recreation (<u>USS\_LST-386</u>)
- Island commander functions for land areas of Bikini Atoll, such as policing recreational areas, conducting shore patrol, and controlling boar traffic at landings
- Boat services
- Medical and hospital services
- Quarters and laboratory facilities on <u>USS Fulton</u> (AS-11) for the Oceanographic Wave Measurement Group
- Surveys in accordance with the Oceanographic Survey Plan
- Construction in accordance with Logistic Plan.

- LCI shuttle service between Bikini and Kwajalein atolls
- Evacuation of Rongerik Atoll population if necessary.

TG 1.8 was composed of the following six task units (Reference 3.0.1, pp. 5 and 6).

TU 1.8.1 (Repair and Service Unit)	
USS A Tax (AR-6)	USS Sioux (ATP-75)
ARD-29	USS Sphinx (ARL-24)
ATA-124	<u>USS Telamon</u> (ARB-8)
ATA-187	USS Tombigbee (ACG-11)
USS Cebu (ARG-6)	USS Wenatchee (ATF-118)
USS Chikaskia (XO-54)	DSS Wildcat (AW-2)
USS <u>Chowanoc</u> (MTF-100)	YC-1009
USS Coasters Harbor (AC-74)	YF-385
USS Creen (ARL-11)	¥F-733
USS Dixie (AD-14) (Flagship)	YF-734
<u>USS Enorce</u> (AO-69)	YF-735
USS Fulton (AS-11)	¥8-752
USS Respecta (AKS-13)	¥P-753
<u>BSS_Limestone</u> (IX-158)	YF-754
USS' LST-388	¥F-990
USS_LST-661	YF-991
USS Munsee (ATP-107)	YF-992
USS Phaon (ARB-3)	YO-132
USS Pollux (AKS-4)	YO-199
USS Quartz (IX-150)	¥0C-63
USS Severn (AO-61)	YOG-70
	YM-92

TV 1.8.2 -- No units assigned

70 1.8.3 (Dispatch Boat and Boat Pool)					
USS Gunston Hall (LSD-5)	LCT-1361	PGM-29			
LCI (L) -977	LCT-1461	PGH-31			
LCI(L)-1091	PGH-23	PGM-32			
LCI (L) - 1062	PCR-24	<u>USS Presque Isle</u> (APB-44)			
LCI(L)-1067	PCN-25	USS San Marcos (LSD-25)			

TU 1.8.4 (Medical Unit)

USS Benevolence (AH-13)

USS Bountiful (AH-9)

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TU 1.8.5 (Survey Unit)
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<u>USS Bowditch</u> (AGS-4) <u>USS James M. Gillis</u> (AGS-13) <u>USS John Blish</u> (AGS-10) YMS-354 YMS-358 YMS-413 YP-636

TU 1.8.6 (Construction Unit)

53rd Construction Battalion (later, Construction Battalion Detachment 1156)

TV 1.8.7 (Rongerik Evacuation Unit)

USS 1.ST-871 USS 1.ST-989

## POST-DPERATION ORGANIZATION AND ACTIVITIES

After 7 September all survey and construction activites at Bikini were rapidly brought to a close, and the atoll was evacuated by 26 September 1946. Following a meeting on the West Coast from 17 to 20 September concerning decontamination procedures, some officers from JTF 1 were ordered to temporary duty under Commander Western Sea Frontier to follow up and coordinate the decontamination, monitoring, and clearance of exposed ships. On 24 September, in a joint speedletter, the Bureau of Ships and the Bureau of Medicine and Surgery assumed responsibility for giving final radiological ship clearances and prescribed detailed decontamination and clearance procedures. JTF 1 was formally dissolved on 1 November: its successor was a JCS committee, the Joint CROSS-ROADS Committee, whose task was to oversee the final test activities, publish the final reports, and supervise the Bikini Resurvey Operation of summer 1947, described in Chapter 6 (Reference C.9.206, pp. V-(D)-5 through V-(D)-7).

## CHAPTER 2

## RADIOLOGICAL SAFETY

#### PLANNING

Proposals to test atomic weapon effects on ships were made at the end of World War II, but the first discussion of radiological safery appears to have occurred at a meeting held 8 December 1945. Among those attending were the commanding general of the Manhattan Engineer District, the chief of the District's Medical section, and a Navy officer closely associated with the atomic bomb project and trained in chemical warfare technology. This officer became Safety Advisor to Commander Joint Task Force 1 (CJTF 1) and headed the task force safety organization. The chief of the medical section, an Army medical officer, became Radiological Safety Advisor to CJTF 1 and headed the task force Radiological Safety Section within the safety organization (Reference A.1, pp. 9, 48, and 49; Reference B.0.1; Reference C.9.206, pp. VII-(C)-1 and VII-(C)-2).

During the next several months, training of radiological safety (radsafe) personnel, organization of the radsafe unit, and writing of the radsafe plan went forward. By 15 December medical officers from the Army, Navy, and Public Health Service had been selected for training in radiological safety. The Manhattan Engineer District took responsibility for radiological safety as the result of a meeting on 7 January 1946 between the joint task force commander designate and the commanding general of the Manhattan Engineering District. The Safety Advisor, the Radiological Safety Advisor, and the Radiological Safety Section were part of the joint task force from the time of its formal establishment on 11 January 1946. By April 15 a radsafe plan was submitted to CJTF 1. The plan was approved with revisions on 28 April. The plan underwent no significant revisions until after shot ABLE (Reference C.9.206, pp. VII (C)-1 and VII-(C)-2). Relevant portions are reproduced in Appendix B.

Radiological safety, however, was only part of the task force's comprehensive safety program. It also included protecting personnel from fire, explosions, and toxic material. By exposing a fleet of warships, many loaded with ammunition, fuel, and 'ubricants, to nuclear explosions, the task force added nuclear safety to the many concerns damage control officers had faced for years.

The tadsafe plan emphasized detection and avoidance of radiation to protect personnel. Systematic reconnaissance was to begin shortly after each detonation. Navy patrol seaplanes (PBMs) were to conduct aerial surveys over the lagoon and destroyers were to patrol the open ocean upwind and downwind of the atoll. Drone patrol boats were to enter the lagoon first to take water samples. Radsafe monitors aboard gunboats (PGMs) and landing craft (LCPLs) were to mea sure the lagoon's radioactivity. B-29s were to track the nuclear cloud. Radsafe monitors were to accompany all units and working parties reentering the target area to recover data or work on the target vessels.

#### RADEOLOGICAL SAFETY RESPONSIBILITY AND ORGANIZATION

Although the Manhattan Engineer District had taken responsibility for radiological safety at CROSSROADS, the District's role actually consisted of providing radsafe equipment and senior radsafe personnel. CJTF 1 was in command at Bikini and major radsafe orders were issued in his name. A Radiological Safety Section was established to advise CJTF 1 in this area and to implement his orders. Its chief was also CJTF 1's Radiological Safety Advisor. During test operations the section operated directly under the JTF 1 Assistant Chief of Staff for Operations. For the purposes of technical advice and instrumentation, the Radiological Safety Section reported to the Technical Director. This dual chain of command caused no difficulty during CROSSROADS (Reference C.9.206, p. VII-(C)-2).

The mission of the Radiological Safety Section was (Reference B.O.), p. E-II-1):

. . . to protect personnel from the hazards peculiar to the use of the atomic bomb during Operation CROSSROADS and to enable personnel to return safely to the target area at the earliest possible moment.

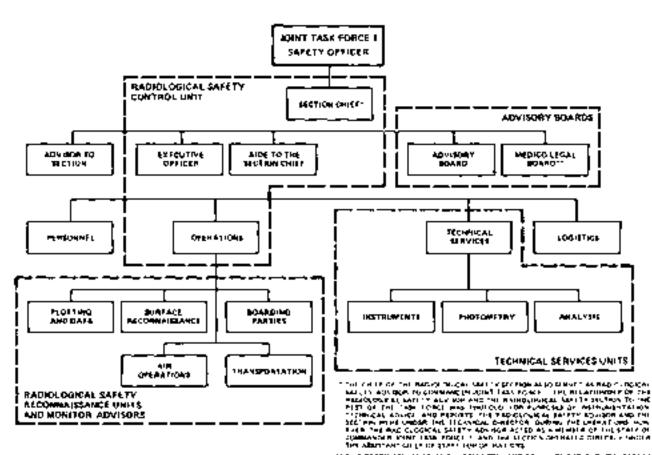
The task force operation plan specified the following elements for the Radiological Safety Section (Reference B.O.I. p. E-FF-1):

- Radiological Safety Control Unit.
- Radiological Safety Advisory Board
- Radiological Safety Reconnaissance Units
- Radiological Safety Monitor-Advisors
- Badiological Safety Technical Service Units.

Documents written during CROSSROADS provide additional details on the section's organization. Figure 12 gives a composite picture based on information from the available sources.

The section chief, his staff, and supporting personnel, such as clerks and radiomen, made up the Radiological Safety Control Unit, based aboard USS Mount <u>McKinley</u> (AGC-7), the task force flagship. They were to (i) receive, plot, and analyze radiological data from all sources. (2) control the radsafe reconsaissance units, and (3) advise CJTF 1 on the 1 ation and amount of radioactivity. They were also to predict the path of the radioactive cloud and the pool of radioactive water.

The Cocmittee for Review of Radiological Safety Measures functioned during most of its existence at Bikini under the title of Medico-Legal Board. It was convened on 15 June 1946 by the chief of the Radsafe Section, after which it met irregularly at his call or when one of more of its members felt a matter required its attention. Initially, it served to evaluate the regulations and safety measures adopted to protect personnel from radiological hazards. Later the board initiated a number of investigations. believing itself warranted in defining its own field of action. A total of 14 men served on the board at one time or another. All were medical doctors, specializing in radiology or with



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## Figure 12. Organization of the Radiological Safety Section, CROSSROADS [sources: References C.9.206, B.O.2, B.O.4, and B.O.7).

radiation safety experience. The board held 14 meetings and considered such topics as the plutonium hazard, permissible beta exposure. fission products in the air. decontamination of personnel. control of overdoses, urinalyses, blood counts, monitoring procedures, and removal of equipment from target vessels (References B.0.7, C.0.5, C.0.6, C.0.7, C.0.8, and C.0.9b).

Planning called for each radsafe reconnaissance unit to consist of a monitor and one or more assistants. Initially, units were assigned as follows: two for PBMs, two for MSO-1 helicopters, nine for destroyers, six for PGMs on lagoon patrol. twenty for LCPLs on lagoon patrol, six for cloud-tracking aircraft, and two for drone boat operations (Reference B.O.1, p. E-II-1). However, as ABLE shot approached it became clear that many more monitors would be needed: in fact, over 225 monitors were used for each of the two shots (Reference C.9.206, p. VII-C-5).

Radsafe monitor-advisors were assigned to commands and aircraft likely to encounter radioactivity. The major function of these monitors was to advise their commands and pliots on radiological safety. In addition, they had a reconnaissance function. Thus, they could quickly communicate with the radsafe control unit to report radiation levels and receive advice on safety measures (Reference B.0.1, p. E-II-8). The Radiological Safety Technical Service Units were composed of instrument repair personnel, photomotrists, and analysts. The instrument repair personnel maintained, repaired, and calibrated all instruments used by the radsafe section. They supplied monitoring equipment to all aircraft operating in the test area that did not carry monitors, and they trained pilots in use of that equipment. The photometrists (dosimetry technicians) calibrated film dosimetry badges, prepared casualty and personnel badges, processed film from badges that had been worn, calculated exposure from film data, and recorded the results. Analysts collected and analyzed samples of water, soil, and marine life for radioactivity (Reference B.D.1, p. E-II-8; Beference B.D.4).

#### PERSONNEL PROTECTION

#### lolerance Exposure

The Operation Plan set the maximum allowable dose or tolerance for exposure over a long period at 0.1 roentgen (R) per 24 hours (Reference B.0.1. p. E-I-3). The National Bureau of Standards had established that limit in 1934, and it was used in manufacturing plants in the United States (Reference B.0.8). The Chief of the Radsafe Section stated that this dosage was based on 2 to 2-1/2 years of experiments with dogs, mice, and fruit flies, and on experience with a workforce of 8.000 people (Reference B.0.9). The Operation Plan also stated that an individual was not to have a total exposure of over 50 or 60 R in 2 weeks. If an individual received 10 R in 1 day or 60 R in 2 weeks he was to be withdrawn from active participation in the operation (Reference B.0.1. p. E-I 3). Such action was never required. The highest accumulated recorded exposure for the operation was 3.72 R, which was received by an Army assistant radsafe monitor badged for 6 days. The highest number of badges issued to a single individual was 19. He also was a radsafe monitor and his cumulative exposure was 2.48 R.

Provision was made for special situations (Reference B.O.I. p. 8-11-9) that might:

. . . permit the assuming of a calculated risk in order to let certain key personnel enter a bazardous area to make highly desirable observations when the total amount of radiation to be received is less than 10 roentgen units. This may be permitted only on direct instructions from Radiological Safety Control. Details of the situation and clearance therefore will be carefully logged by the accompanying monitor and at Radiological Safety Control.

There is no record that this special provision was invoked during the operation.

On 5 August the Medico-Legal Board recommended that three monitors refrain from monitoring for 1 or 2 days because of badge readings in excess of 0.1 R (Reference C.0.10). Later, monitors who exceeded the colerance were removed from work on <u>USS Salt Lake City</u> (CR-25) (Reference C.0.11).

#### film Badges

Two types of film badges were used at CROSSROADS. One type, called a personnel or mission badge, had a range from 0 to 2 R. Badges were issued to some of the men about to enter possibly radioactive areas and most badges were collected after the men returned, usually the same day. Some badges were worn for 2 or 3 days, and a few worn for as long as 9 days have been noted. Each badge contained a piece of Kodak Type X double-coat film in a dental film packet holder. Strips of lead were crossed over the film at right angles, leaving the film's corners without lead covering. Each badge was sealed in a tropical weather-proof envelope to protect it against the hot, humid Bikini climate (Reference C.0.5, p. 2-2).

The badges were designed to measure both beta and gamma exposure, but the beta readings obtained and recorded are now considered questionable (Reference C.13.2). There are several reasons for this. One is that the response of the double-coated film dosimeter emulsions depends on the energy of the beta particles they are exposed to. Unless additional thin metal foils are used over the films to filter or sort the beta radiation into known energy groups, or unless the energy distribution of the beta radiation is otherwise known, very large errors in interpreting the film darkening can result. There also appear to have been some incorrect assumptions made concerning whether gamma as well as beta would darken the unfiltered areas (Reference C.13.2). Despite the doubtfuiness of the validity of the beta readings, the values as originally assigned have been accepted and used in total dose assignment in the NTPR program (Reference C.13.2).

After a badge was returned to the Radsafe Section, the photometrists of the Radiological Safety Technical Service Units developed the film in it and measured the film's optical density. This was a measure of the amount of radiation to which the film had been exposed. The film number, the wearer's last name, and the exposure date and time were written on a line on the left-hand page of an open ledger book of the type then widely used by Federal agencies. Sometimes the individual's first name, initials, or rank were written in. Sometimes the name of the ship where he was quartered or, more often, the target ship on which he had worked that day was entered. If the badge had been used on an island or ship as a radiation recorder, the location information was recorded instead of a person's name. Optical densities under the lead cross and on the corners of the badge were entered on the right-band page. The radiation exposure was calculated from these densities and recorded as the final beta and gamma readings at the page's far right. Years later, the pages were removed from the ledgers and microfilmed. Information from badges worn duting September, October, November, and December of 1946 was recorded on large (S- x8-inch) cards for each individual.

Neither the detached pages nor the microfilm is easy to work with. The penmanship of the radsate staff is not always legible, and incomplete identification of the badge wearers and inconsistent ship identifiers are additional problems. In 1968 the Reynolds Electrical and Engineering Company (REECo) transferred the information from the ledgers to a computer data base, allowing easier manipulation and analysis of the material. The REECo list is used as the basis of the personnel exposures in this report.

48

Multifilm badges, called casualty badges, were used to record high-range exposures. They were placed aboard a small number of ships and aircraft that might enter areas of high radiation. Casualty badges were also placed aboard target ships as part of the scientific program to determine exposure from the detonations.

Radiological Safely Instruments

CROSSROADS requirements for radsafe instruments turned out to be far greater than had been expected when planning for the operation began. No comprehensive program existed for development and manufacture of rugged instruments for use under field conditions: thus, the head of the Radsafe Section had to make do with what the Manhattan Engineer District could provide from its inventory and what the Victoreen Instrument Company could manufacture quickly (Reference C.11.1: Reference C.0.12, p. 18).

Each monitor unit or monitor-advisor was equipped with a Geiger-Mueller counter (X-263 Survey Meter) and an ionization meter (Model 247 Survey Meter), as well as other equipment, depending on the nature of the mission (Reference B.O.1, pp. E-II-2 through E-II-8).

The X-263 measured beta and gamma radiation from about 0.001 R/24 hours to about 0.4 R/24 hours (References 8.0.10 and C.0.13). This range made the meter too sensitive for some radiation fields encountered during CROSSROADS (Reference A.2, pp. 7 and 8). The X-263 proved too delicate to function consistently under field conditions (Reference C.0.14, p. 3). Three hundred twenty of these instruments were available 2 days before BAKER (Reference C.0.12, p. 9). Every monitor tried to have three or four of them to assure that at least one would be working when he reached his post (Reference C.0.15, p. 3).

The 263 G.M. Set. an older version of the same instrument. also was used at Bikini, but information is lacking on the number available. Experienced monitors preferred it whenever accurate and reliable data were required (Reference C.0.12, p. 18).

The 247 Survey Meter measured gamma radiation only. Its range was from 0.5 to 200 R/24 hours, and it was often used for measuring intensities beyond the range of the X-263. It was rugged, spray resistant, and held its calibration well (Reference A.2, pp. 7 and 8; Reference C.0.12, p. 23). Twenty of these were available for monitoring after the BAKER detonation (Reference C.0.14, p. 3).

Pocket dosimeters were designed to measure cumulative gamma dose up to about 0.3 R. About 160 were issued for the BAKER test. They were relatively rugged and easy to repair. Apparently they were often issued to divers (Reference C.0.12, pp. 27 and 28).

Several other instruments were available to the monitors, although in numbers smaller than the X-263, the 247, and the pocket dosimeter. The LSW Survey meter measured between 0.001 and 25 R/24 hours. Twelve were in service following BAKER. They were used mostly by boarding parties and by special groups. Such as the target monitor group. The head of the monitor group wrote

that the L&W meter was the most reliable instrument for these measurements because it was energy-independent and insensitive to temperature and humidity changes (Reference C.0.16). Six assault meters, brought out by individual monitors, were used during the operation. They were very rugged and ideal for guick and rough determination of radiation levels from D.1 to 10 R/24 hours. They proved useful for boarding ships and similar operations (Reference C.0.12, p. 31). The "cutie pie" survey meter was a small instrument capable of measuring beta and gamma radiation up to 100 R/24 hours. Few of these were available for CROSSROADS, but a monitor aboard PCN-32 after BAKER used one and decided it was an excellent portable rate meter (Reference C.0.15, p. 4).

The task force had several instruments for measuring alpha contamination. None, however, proved reliable for field surveys. Photographs of task force activities show the Zeus counting meter, the Zeuto, and the X-323. These three instruments were mentioned in training lectures for monitors (References C.0.17 and M.0.11). One or all may have been the Poppy of Walkie Poppy referred to in radsafe reports after BAKER. The three devices appear to have been small, and each had a carrying handle, but apparently they did not work well outside of USS <u>Haven's (AH-12) air conditioned laboratories in the hot, humid Bikini cli-</u> mate (Reference C.0.14, p. 4). In addition, the Radsafe Section had five Filter Queen Air Samplers. Basically, these were tank-type vacuum cleanets with an alpha detector and filter paper mounted in the intake tube. Samples collected in the filter papers aboard the target ships had to be returned to <u>Haven</u> where alpha counts were made. Initially, the alpha detectors worked well, but humidity, along with personnel opening the detectors improperly, caused them to fall (Reference C.0.12, pp. 8 and 9).

## Personnel Decontamination

Personnel working in radioactive areas sometimes picked up radioactive particles on their bodies and their clothing. Procedures were established to minimize the spread of this contamination and potential internal and external exposure from these radioactive sources. The procedures spelled out for the USS Alax (AR-6) crew working on repair of Salt Lake City following BAKER were typical and are summarized in the following paragraphs.

<u>Ajax</u> crewmembers slated for work on <u>Salt Lake City</u> left their own compartments wearing only their own shoes. These shoes were removed and left in a compartment adjacent to a designated head (bathroom) where the men donned work clothing. They then left <u>Ajax</u> via a Jacobs ladder into a small boat while cattying canvas gloves and shoe covers. The gloves and shoe covers were put on immediately before boarding the target ship for work and were taken off just before leaving.

Upon return to <u>Ajax</u>, the men boarded by Jacobs ladder and went to the upper deck where they were monitored. They walked only on a deck covering, which presumably was disposed of after use. The men first washed their hands and forearms with hot water and salt-water soap. Then each man washed his own clothing. These were first scrubbed in hot water and salt-water soap and then rinsed in a special hot rinse and rinsed again in plain hot water. The clothes were hung on lines to dry on the upper deck. Clothing so contaminated that it read more than 0.10 R/24 hours (gamma) was placed in paper bags, and radiation was allowed to decay for a period of time before the clothing was washed. If the radiation did not decrease to less than 0.10 R/24 hours, the clothing was disposed of at sea.

After the clothing had been washed or put aside to cool, the men took a shower in the decontamination head in a designated stall with hot water, thoroughly soaping themselves with salt-water soap. They then proceeded to a second stall where they again showered with ordinary soap. The men were monitored again and if free of contamination could return to their own compartments: otherwise they continued showering (Reference B.0.12).

Commander Task Group (CTG) 1.2 set a slightly lower radiation level, 0.05 R/24 hours, above which the ciothing was to be disposed of at sea. The contaminated clothing was to be bundled and weighted and the Radsafe Section was to be notified. An LCT picked up the bundles the next day and dumped them 10 mml (18.5 km) from Bikini at sea.

Clothing in small lots was laundered in separate buckets (like the <u>Ajax</u> procedure above) or done in the ships' laundry if in large lots. If the ships' laundry were used, however, the clothing had to be separately done and the laundry machinery had to be specially cleaned after use (Reference C.10.8).

#### Unine Testing

The discovery of alpha emitters, including plutonium, led to urine tests for personnel thought to have been exposed to determine whether any had taken these substances into their bodies. The water-testing laboratory on <u>Haven</u> was converted for testing urine. By 15 August, 2,600 samples had been tested. The men doing the work had to use instruments that were on hand and develop techniques as they worked. The widespread presence of radioactive material led to high background counts and made it difficult to determine whether an individual had low levels of alpha emitters in his urine. On 15 August the Radsafe Section reported slight beta activity had been found in the urine of 2,600 wen checked (Reference A.2, pp. 117, 118, and 121 through 125; Reference C.10.9; Reference C.10.15). Despite all the concern and discussion about it, there is no indication in CROSSROADS documentation that positive alpha counts were found in any urine samples.

#### Eye Protection

Eye protection from the ABLE flash was a major concern. Approved darkened goggles were provided to personnel on ships 25 nmi (46 km) or less from the ABLE detonation and to all observers on the press and observer ships. Men without goggles within 30 nml (56 km) were to turn away from surface zero. look down at the deck, close their eyes, and cover their eyes with their arm (Reference B.0.1, pp. E-I-1, E-J-2, and E-IV-2). Pilots althorne at the time of the detonation were to wear approved goggles and turn their heads away from the detonation. In addition, each copilot was to close his eyes and cover them with his arm so that he would be ready to fly the aircraft 1f the pilot was flashblinded (Reference B.0.1, p. F-XII-5).

## EXCLUSION AREAS AND OPERATIONS LIMITS

#### Surface Operations

To reduce the chance of exposing task force personnel to radiation, several surface areas were defined by the Operation Plan to which access was forbidden or restricted (Reference C.9.206, p. VII-(C)-9):

- Surface Survey Sector. This was a forbidden surface area outside the lagoon. It was bounded by two bearings drawn from the detonation point and by a radius that increased with time after the detonation.
- Red Line. This line surrounded the Jagoon area within which the radiation level was 1 R/24 hours or higher. This boundary was separate from the Red Arc that defined airspace limits.
- 3. Blue Line. This line marked the boundary between the lagoon area with a radiation level more than 0.1 R/24 hours and the area with a lower level. Vessels could operate in the lagoon area between the Blue and Red Lines only for specified periods of time with permission from the Radiological Safety Control Unit. Vessel movement outside of the Blue Line was governed only by regular Navy rules.
- Anchorage Area Able. Ships could anchor in this area. provided they were ready to get underway on 1 hour notice.
- Anchorage Area Baker. An uncestricted anchorage area.

In addition, certain operational limits were specified. No manned ships were to be closer than 10 nml (18.5 km) from the ABLE detonation, and most were to be 20 nml (37 km) away (Reference B.0.1, p.  $\mathcal{E}$ -IV-1). In case of fallout on the ships, nonessential personnel were to be sent below decks, the ship closed up, and exposed personnel were to strip off their outer clothing before taking cover. If necessary, men in coveralls and gas masks were to decontaminate contaminated areas of the ship after fallout ended (Reference B.0.1, p.  $\mathcal{E}$ -IV-7).

Before each test all ships were to have full freshwater tanks. Distilling plants and heat exchangers were not to be operated until the Radiological Safety Section had declared the saltwater to be used was radiologically safe. If the equipment had to be operated before radiological clearance had been given, special monitoring attention was required (Reference R.O.L. p. E-IV-10).

In order to gain access to classified or radioactive areas, the leader of a work party was required to present an identification card and a letter of authority. There were letters for damage control. instrumentation, observer, press, and radiate parties, among others (Reference B.0.3).

#### Aerial Operations

Initially Joint Task Force One Operation Plan 1-46 (OpPlan 1-46) prescribed certain general safety precautions for air operations. It specified that all aircraft aloft from H-2 hours to H+30 minutes carry a radiation monitor with monitoring equipment. Exceptions were the bomb-drop and pressure-gauge-drop

A-29s, single-seated aircraft, and those other aircraft so designated by CJTF 1 as exempt. The creamembers of all aircraft aloft during that period were to wear film badges, and each aircraft was to carry at least one cosualty badge capable of recording radiation much higher than personnel film badges. In actuality, these plans were modified somewhat for both shots. For shot ABLE, tadiation monitors were aboard all photographic aircraft, reconnaissance aircraft, drone control aircraft (except the Navy F6Fs), air-sea testue aircraft, and press/observer aircraft. The F6Fs were single-seated, fighter-type aircraft in which radiation monitoring equipment was installed for the pilot's protection. On shot BAKER, radiation monitors were aboard all photographic all photographic all photographic aircraft, reconnaissance aircraft, not press/observer aircraft, and press/observer aircraft (Reference C.9.206, pp. VII-(C)-10 and VII-(C)-19).

The prohibited airspace for aircraft was defined separately for each of the two tests and was a function of time and range. For the first 6 minutes after detonation, no aircraft was to approach closer than 10 rmi (18.5 km) to surface zero. From H+6 to H+3D minutes, a radiation danger sector (radex) was defined. consisting of two bearings drawn from surface zero, e.g., 320<sup>D</sup> clockwise to 1209. From H+6 to H+18 minutes, the aircraft exclusion area consisted of all space in this sector within the Red Arc. From H+18 to H+30 minutes, the exclusion area was all space in this sector within the Blue Arc. The Red and Blue Arcs were decided upon based on wind speeds the morning of each detonation. The morning of each shot, the radex sector was updated from the one predicted the previous evening. The Red Arc was, by definition, nearer surface zero than the Blue Arc. Specific values for radex sectors and the Red and Blue Atcs for the ABLE and BAKER shots are discussed in Chapter 4 (Reference B.0.6). In addition, no aircraft without radiation detection instrumentation was to approach closer than 20 nmi (37 km) to the visible column or downwind clouds. From H+30 minutes to H+30 hours, no aircraft was to be within 30 mmi (56 km) of surface. zero unless engaged in radsafe work or cleared by the Deputy Commander for Aviation (Reference B.O.1, p. F-XII-3).

All aircraft, manned and drone, airborne iron H-hour until H+30 were to be monitored upon landing. Aircraft oil filters and any surface oil spots were to receive special monitoring attention. All drones were considered heavily contaminated until proven otherwise (Reference B.0.1, pp. E-IV-3 and E-IV-4).

#### STAFFING AND TRAINING

## Selection of Personnel

When the Radiological Safety Section was established in January 1946. It was believed that 50 to 60 monitors would roneeded. Between 20 and 30 were to be experienced radsafe practitioners from the Manhattan Engineer District and thirty were to be doctors from the Army, Navy, and U.S. Public Health Service. The latter group, including a chemical warfare officer, reported to Oak Ridge National Laboratory on 15 January for an intensive linweek course. The course included the physics of radioactivity, nuclear safety techniques, biological effects of radioactivity, field training, and hazards of ingested tadio nuclides. Experts from Oak Ridge and Los Alamos laboratories and from the universities of Rochester, Chicago, and California at Berkeley provided instruction (Reference C.9.206, p. VII-(C)-4). As the Chief of the Radiological Safety Section and his staff continued work on the radsafe plan, they realized that a much larger group of monitors and other experts would be required than would be available from the Manhattan Engineer District. To fill this gap, the section chief called on a number of scientists who had already returned to civilian life from wartime service with the government. Few were eager for another extended period of government service, and they and the universities or laboratories employing them demanded, and received, promises of strict limits on the duration of their CROSSROADS Service. Apparently, all were to be back in the United States by late August or early September (Reference C.9.206, p. VII-(C)-4).

On 23 March 1946. efforts to staff the Radiological Safety Section were dealt a major setback when the President announced that the first test was to be postponed from 15 May to 1 July (Reference B.12.1. p. 1). with the result that the second test also was delayed. This change raised the prospect that personnel from colleges and universities would not be back on campus for the start of the fall semester. The Chief of the Radiological Safety Section struggled to hold his civilian recruits, but many resigned and he was forced to search for replacements. We asked for more military officers and was supplied with 55 from the Navy and 15 from the Army, almost all of whom were reservists. He also was able to obtain some additional civilians (Reference C.9.206, p. VII-(C)-5; Reference B.0.5).

#### Bikini Activities

Most of the Radiological Safety Section reached Bikini on 12 June aboard <u>Haven</u> (Reference A.2. p. 11). Some personnel. However, did not attive until after the ABLE shot or the BAKER rehearsal, and some civilians left Bikini before the BAKER detonation. The Radiological Safety Section was able to muster over 300 personnel for ABLE. Over 225 monitors were available for each of the two shots, but they were stretched thin. During ABLE there were more monitors than during BAKER (Reference A.1. p. 31; Reference C.9.206, p. VII-(C)-5).

Training of Radiological Safety Section personnel had three phases. First, intensive training for the original group of military and public health personnel at Oak Ridge and other locations beginning in mid-January; second, training of the entire section aboard <u>Havon</u> on the way to Bikini: and, third, additional training for the section and for later acrivals once at Bikini.

One of the monitors, a medical doctor drafted into the Army late in the war and assigned to CROSSROADS, characterized the group aboatd <u>Haven</u> as follows (Reference  $\lambda$ , 2, p. 5):

Most are older men, some are well-known scientists. Some have worked with radiation in the Manhattan District, but the majority come with little more than a scientific background. Test ABLE is only one month away. Since this group is to have the responsibility for protecting task force personnel from the invisible dangers of radioactivity, the problem of briefing them on the fundamentals and the practical aspects of radiation is acute.

Training for the entire section began aboard <u>Haven</u> on 31 May as the ship steamed for Bikini. It consisted of lectures and work with radiation detection instruments. The 12-day curriculum is shown in Table 3. On the seventh day, personnel were divided into groups by job: destroyer monitors, aircraft monitors. PCM monitors, etc. They were issued instruments, and radium sources in lead "pigs" (containers) were used to give the men experience calibrating and reading their instruments under a semblance of field conditions (Reference A.2, p. 7; Reference C.9.205, pp. VII-(C)-6 and VII-(C)-7).

<u>Haven</u> arrived at Bikini on 12 June, and a task-force-wide tebeatsai. called Queen Day, was held on 14 June. Two problems for the radsafe section became immediately apparent. First, because of a shortage of electronics technicians, radios on <u>Mount McKinley</u> used by the Radiological Safety Control Unit could not be kept operating adequately under the heavy load put upon them. Second, the 24 landing craft assigned to the Radiological Safety Section were in very poor repair and their radios were even worse. Only six of the twenty-four landing craft could participate in this first exercise, and four of them broke down within 3 hours. Noither <u>Mount McKinley</u>'s radios nor the landing craft were fully ready for the ABLE rehearsai. Their first completely satisfactory performance was on ABLE day (Reference C.9.206, p. VII-(C)-8).

Task force petsonnel had various means of learning about the upcoming operation and the safety procedures and the problems that might be encountered. Ships' newspapers and Plans of the Day carried many articles on CROSSROADS. The Operation Plan was available on each ship and formed the basis for indoctrination of the ship's force about what to expect and what safety precautions were to be taken. A bulletin addressed to the officers and men of USS Wharton (AP-7) and signed by the Director of Ship Materials (DSM) gave a description of the projected detonation and the arrangement of the target fleet. The bulletin also included the statement that from time to time members of the staff would give lectures on various aspects of the bomb tests that would be of general interest (Reference B.O.14). This bulletin probably was typical of the briefing materials used throughout the task force. In addition, there was a full-scale rehearsal stressing safety before each test. Most of the scientific personnel collecting data on phenomenology and blast effects were probably fairly well-versed in radiation safety from their service with the Manhattan Engineer District. Units designated to enter possibly radioactive areas received briefings from members of the radsafe staff, usually the unit's assigned monitor, on radsafe procedures needed for their particular assignment (for example, see Reference B.O.I. p. F-X11-3). The radsafe monitors were responsible for the safety of personnel reboarding target ships. Task force personnel received general indoctrination on radiation safety and nuclear effects.

#### Continuing Need for Radiological Safety Personnel

Even after ABLE and BAKER had been detonated and the first phase of CROSS-ROADS drew to a close, the need for radsafe monitors and other radsafe personnel continued. The contaminated target and support ships presented a relatively long-term problem, and CHARLIE, the third test in the CROSSROADS Series, was still planned. Moreover, the series' first phase had brought home to the military leadership the need for a substantial military radsafe organization.

August saw the beginnings of activity designed to begin meeting these longterm needs. On 5 August. CJTF 1 asked the Navy Bureau of Ships for 100 naval Table 3. Basic intensive courses for CROSSRGADS radiological safety monitors.

Day	Time	Course Title
1	0830-0920	Introduction: Mission of the Radiological Safety Section
	0930-1020	Mechanics, Force, and Energy
	1030-1120	Electricity
	1300-1400	The Atom Speaks
	1430-1520	Casualties at Niroshima
		Conference
	1900	Physical Damage at Kiroshima
2	0830-0920	Alomic Structure
	0930-1020	The Bohr Theory
	1030-1120	lonization and Quantum Concepts
	1300-1520	Group Seminar
	1530-1620	Instruments Demonstration
	1900	Radioaclivity
3	0830-0920	K-rays; Alpha, Beta, and Gamma Rays
	0930-1020	Mass and Energy
	1030-1120	Nuclear Composition
	1300-1520	
	1530-1620	Demonstration of the X-263
	1900	Thermal Radiation
Ą.	0830-0920	
	0930-1020	
	1030-1120	
	1300-1520	
	1530-1620	
	1900	Effect of Radiation on the Human Body: Radiation Sickness
		and Other Pathology
5	0830-0920	Chemistry of Plutonium, Uranium, and Fission Products
	0930-1020	Nuclear Cross-Section and the Production of Plutonium
	1030-1120	Mesons and the Synchro- or frequency-Modulated Cyclotron
	1300-1520	Demonstration and Group Seminar
	1530-1620	Demonstration of the Pocket Dosimeter
	1900	Physical Damage to the Principal Hospitals and First-Aid
		Stations in Nagasaki

[continued]

Table 3.	Basic intensive courses	for	CROSSROADS	radiological	safety monitors
	(continued).				

0ay	Time	Course Title
6	0830-0920	fonization Chamber and Geiger-Nueller Counter
	0930-1020	
	1030-1120	
	1300-1520	
	1530-1620	
	1900	Physical Damage at Nagasaki
,	0830-1120	
	1300-1620	
	1900	Thermal Radiation
8	0830-1120	
	1300-1620	
	)900	Radioactivity from a Nuclear Blast
9	0830-1629	
	1030-1120	
	1300-1400	
	1430-1520	
	1530-1620	Land Monitoring
	1900	Biological Studies
10	0830-0920	
	0930-1028	
	1030-1120	
	1300-1520	
	1530-1620	Instrument Repair
	1900	Biological Studies
11	0830-0928	
	0930-1626	
	1030-1120	
	1300-1520	
	1530-1620	Instrument Repair
12	0830-0920	
		Evaporator Clearance
	1030-1120	
	1300-1620	Field Exercise

officers with technical or scientific backgrounds to be assigned to radsafe work. The officers were to be available by 1 September to begin intensive training designed to prepare them to replace the existing monitor personnel no later than 1 November so that study of the BAKER results and decontamination of the ships for test CHARLIE would not be delayed (Reference C.10.10). On 10 August, CJTF 1 ordered his rear echelon element in Washington to secure approval from the Chief of Naval Operations. Navy Bureau of Personnel, and the Navy Surgeon-General for a program to be set up by JTF 1 to train 100 new monitors. He also indicated that these new radsafe personnel might be needed to help monitor the drydocking of task force ships returning to the United States (Reference C.10.12). Most radsafe personnel left Bikini for the United States on 16 August aboard USS Henrico (APA-45). leaving a much reduced radsafe organization on Naven to continue radsafe work at Bikini (Reference C.9.206, p. VII-(C)-24). Personnel traveling on <u>Henrico</u> probably were mostly civilians returning to their campuses and laboratories or military officers at the end of their terms of service. Under discussion by 20 August was a proposal to add 25 members from West Point's class of 1946 to the group to undergo monitor training (Reference C.10.13). The training program was to start on 9 September at the Navy Department in Washington, with field work at Alamogordo and on the target ships at Kwajalein or Bikini. After their training, the new monitors would be assigned to JTF 1 (Reference C.0.2). One attendee wrote he received 4 weeks of instruction in "basic radiology" in Washington, D.C., and did laboratory work at the Radiation Safety Laboratory, San Francisco Naval Shipyard, Hunters Point, California, before reporting to the Radiological Safety Section at Kwajalein (Reference B.D.B).

The potential radsafe needs created by Test CHARLIE disappeared, however, when President Truman cancelled that test on 7 September.

## OCEANOGRAPHIC SURVEY

While radsafe planning and organization of the Radiological Safety Section went forward in the United States, important radsafe preparations also took place at Bikini. Beginning on 10 March 1946. civilian and military scientists at Bikini aboard <u>USS Bowditch</u> (AGS-4) conducted detailed oceanographic. biological, and geological surveys of the atoll. From the radsafe perspective, their most important work was an effort to chart the currents in the atoll's lagoon. This information was needed to estimate what might happen after BAKER when a large amount of radioactive contamination would be dispersed in the lagoon and perhaps into the surrounding ocean. The safety of the task force and the ability of its recovery teams to reenter the target atea were involved (Reference A.1, p. 92).

After the shots, the radsafe section monitored the radiation level in the lagoon water through the use of drone boats, PGMs, and LCPLs (Reference A.2, p. 100). Monitors accompanied scientists collecting Fish, coral, and samples of the bottom. On 9 August, a monitor with a collection party found the first bottom sample so radioactive he ordered it pitched over the side (Reference A.2, p. 108). Highest recorded activity on a bottom core sample was 0.292 microcuries/gram in newly deposited sand and mud from the first 6 inches of the core (Reference C.9,209, Annex J. Figure 7).

#### WEATHER PREDICTION

Accurate weather predictions at least 24 hours in advance were needed to allow the task force to complete the complex final preparations for a detonation and to give reasonable assurance that radiological safety could be maintained. Cloud cover had to be at a minimum for the ABLE airdrop to allow the bombardier to see the target ship. Wind direction, not only near the surface but up to 60.000 feet (18.3 km), had to be such that it would not carry fallout over the task force. Moreover, wind direction had to be fairly steady so that fallout areas would be predictable. Tropical meteorology was not well developed at that time, and detailed data of past weather patterns at Bikini were lacking. The exacting forecasting requirements for CROSSROADS posed a major challenge.

The official forecast issued the day before a planned detonation and used as a major element in the decision to proceed included: the amount, in tenths of sky coverage, of low, middle, and high clouds: the altitude of the base and top of the low clouds and the altitude of other cloud layers: precipitation (if expected): the wind direction and velocity in 5.000-foot (1.5-km) increments from the surface to 60,000 feet (18.3 km): height of the tropopause: and visibility, temperature, and relative humidity (Reference C.9.207, p. ViI-(0)-17).

Responsibility for furnishing weather forecasts or weather advice for task force operations was vested in the Staff Aerological Unit located on Mount McKinley. The unit was to prepare special forecasts for the Radiological Safery Unit to help anticipate movement of the radioactive cloud (Reference B.O.), p. T-2). Because of lack of space on <u>Hount Mckinley</u>, a significant portion of the personnel doing weather data analysis was stationed on Kwajalein at the Weather Central. To supply upper air and surface data, aerological units of from four to six personnel were stationed on USS Shangri-La (CV-38). USS Saidor (CVE-117), USS\_Fall\_River (CA-131), and USS Albemarie (AV-5). These personnel also provided weather briefings to task group commanders and aircrews. To gather surface data, one-man aerological units were stationed aboard USS Orca (AVP-49). <u>Bowditch</u>, <u>USS Kenneth Whiting</u> (AV-14). USS Blue Ridge (ACC-2), and USS Appalachian (AGC-1). Weather Central received reports daily or more often from weather stations on Wake, Enewetak, Tarawa, Majuro, Kwajalein, and Marcus islands and from two weather ships northeast and northwest of the Marshall Islands at 12°45'N, 180°0'W and 12°0'N, 153°40'E, respectively (Reference C.9.207, p. VII-(0)-22). Data from more distant U.S. and foreign weather stations Eunneled through Fleet Weather Central in Hawaii were also used.

At least one B-29 and one PB4Y-2 flew out of Kwajalein each day for weather reconnaissance, the B-29s usually toward the east and the PB4Y-2s toward the west. More flights were scheduled as necessary. On ABLE and BAKER days, three flights passed through the Bikini atea.

The weather forecast for the following day was presented to CJTF 1 each day at 0830. From that he decided if the weather would allow the next day's planned operations. A second briefing for the commander was held daily at 2200. On the basis of this briefing, he decided whether to hold to the morning's decision or alter it. Continued weather input was provided the commander (Reference C.9.207, pp. VII-(0)-9, through VII-(0)-19).

## RADIOLOGICAL SAFETY PREPARATIONS FOR BAKER

Because BAKER was the first underwater detonation of a nuclear weapon, neither the participating scientists nor the task force leadership could predict with certainty how the lagoon water would react to and modify the explosion cloud. Spread of radioactive contamination and creation of damaging waves were major concerns. Simulation using conventional explosive charges was one approach to estimate the effects. In one effort to predict the spread of radioactivity. 1.000-1b charges of TNT were detonated and the results extrapolated upward to the expected 20-KT yield of the BAKER device (Reference B.0.15, pp. 13 through 16).

During the period March to May 1946, several organizations under the Supervision of a professor from the University of California carried out experiments for the task force on wave action in shallow water (Reference C.0.18; Reference C.0.12.3, p. 6). In 1946, computer simulations were still in the future, but various scientists applied their slide rules and scientific imagination to the forecasting problem. One study analyzed the possibilities largely on the basis of the height to which the column of contaminated water might rise. A rise of only 10,000 feet (3.1 km) would present the greatest hazard because most of the contamination would fall on the target ships or back into the lagoon. Reboarding some target ships within 1.000 yards (9.1 meters) of the detonation might be dangerous for weeks because of the contamination deposited from the water column (Reference C.0.19, pp. 5 and 9).

In an early overview of the operation, CJTF 1 offered the opinion that following BAKER (Reference B.0.16, p. 7)

It will be undoubtedly be some weeks before the lagoon and target ships are again habitable. During this period, some of the task force ships may be sent to anchor at Xwajalein. If it should turn out that the target ships will not be habitable for months, other arrangments will be made.

On 18 June. An appendix was added to the Operation Plan that gave a description of the underwater detonation's expected effects (Reference B.O.1, pp. E-X-1 through E-X-17 and B-IX-1 through E-IX-4). The ball of fire or steam caused by the detonation was predicted to rise to an altitude of from 10,000 to 60,000 feet (3.1 to 18.2 km). The most likely altitude was predicted to be 30,000 feet (9.1 km) (Reference B.O.1, p. E-IX-1, Change No. 6). However, a postoperation document indicates that planning was based on a prediction of maximum altitude of 15,000 feet (4.6 km) (Reference C.9.206, p. VII-(C)-18).

The appendix further predicted that a plume of water might rise, extend for several thousand feet above the surface, and then fall back into the lagoon. Radioactive material would be deposited initially in the lagoon within boundaries represented by a cylinder several hundred yards in diameter and extending from the surface to the bottom of the lagoon. The trail of water and steam following the ball of fire would be heavily contaminated. Distribution of radicactivity in the water was anticipated to be more widespread than following ABLE and would persist for a longer period. Target ships within 1,500 yards (1.4 km) of the explosion would be seriously contaminated. Downwind serious contamination would occur beyond 1,500 yards (1.4 km). It was expected that some target ships might be so heavily contaminated they could not be boarded safely for an indefinite period (Reference B.O.I, pp. E-IX-1 and E-IX-2).

Following conferences attended by senior radsafe personnel. a new appendix to the CJTF 1 Operation Plan radsafe annex was issued in 15 July. Under the revised radsafe plan, the Radiological Safety Section retained its five major elements. Since radioactivity from the underwater explosion was expected to be last longer and be more intense than from ABLE, personnel were added to the Radiological Safety Control Unit for around-the-clock operation (Reference C.9.205, p. XII-(C)-16). Some additions and subtractions were made to the radsafe reconnaissance units. A third PBM unit and one upwind destroyer unit were added to improve lagoon reconnaissance. Three cloud-tracking units were dropped, presumably because the underwater explosion was not expected to create a cloud as high and far-reaching as ABLE (Reference B.0.), pp. 8-X-1 and E-X-5).

The total number of civilians and military officers in the Radiological Safety Section changed between ABLE and BAKER as follows (Reference C.9.206, p. VII-(C)-5):

	ABLÉ	BAKER
		and the second se
Civilians	130	93
Navy Officers	77	102
Army officers	96	63
Total	303	258

The number of monitors probably decreased, but more than 225 were available for BAKKR (Reference A.I. p. 31).

The distribution of radsafe monitors was changed for BAKER: (ewer were put on LCPLs and more were assigned to the DSM. Sixty-one were placed under the control of the DSM with duties as follows (Reference B.O.1. pp. E-X-J4 and E-X-J5):

- The DSM and his deputy each were to have a monitor acting as his technical advisor and administrative assistant on radsafe matters
- Six monitors were to have radsafe duties in support of emergency firefighting and salvage operations as directed by the DSM or bis radsafe advisor
- Two monitors were to accompany each of the ten initial boarding teams and to act as radsafe advisors to the team captains
- Thirty-three personnel were to act up wonitors for the target ship crews when they reboarded their ships and as radsafe advisors to the ships' captains

Monitor duties were basically the same for ABLE and BAKER, for BAKER, however, monitors were admonished to (Reference B.C.1. p. E-X-16): . . . frequently check radioactivity of various parts of their own ship or craft including underwater hull and all intakes. particularly condensers, boilers and other places where there may be a concentration from contaminated water.

Definitions of the radex area and surface survey sector were changed so that no real difference between them existed (Reference B.O.I, p. E-X-3). Both names were retained, however, since operational personnel were familiar with them. The definitions of the Red and Blue Lines remained the same, but a few special salvage vessels with senior monitors aboard were allowed to operate independently between the Red and Blue Lines. The definitions of the anchorage areas remained unchanged, but a boating area was established where unrestricted movement of small boats was allowed. By implication, small boat traffic beyond that area was more strictly controlled (Reference C.9.206, p. VII-(C)-18).

As before ABLE, training was an important feature of the radsafe organization's activities. Newly arrived monitors were given instruction by experienced personnel. Daily communication drills were held by the Radiological Safety Control Unit using the PGM. LCPL, and drone boat circuits. On 16 July the Radiological Safety Control Unit held a drill on <u>Mount McKinley</u> to train new members of its expanded staff. On 19 July the entire radsafe organization participated in William Day, the joint task force rehearsal for BAKER. So that radsafe personnel would not be caught unaware by major new hazards, they met on several occasions with scientists in charge of the BAKER test and were briefed on the expected results (Reference C.9.206, p. VII-(C)-17). The monitors met with the commanders of the LCPLs and PGMs between William and FAKER days. Two more communications drills were held and by 22 July all radsafe personnel and equipment were considered ready (Reference C.9.206, p. VII-(C)-i8).

Radsafe operations immediately before and after the BAKER detonation are described in Chapter 4. "Test Operations." Chapter 5. "Post-BAKER Operations: Bikini. Kwajalein. and the United States." continues the discussion of radsafe operations as the contaminated target ships are moved to Kwajalein Atoli and. later, as some of them are returned to the United States for final examination and disposition.

## CHAPTER 3

### CROSSROADS EXPERIMENTAL PROGRAM

## INTROBUCTION

In late 1945 and early 1946 several conferences were held by the Manhattan Engineer District Project with the military services. It was agreed that the CROSSROADS program should gather data:

- On the nature, range, and duration of radiation danger.
- On bomb efficiency, burst location, wave formation, and ship movement
- For ship designers and ordnance designers to aid in assessing damage from and designing protection against nuclear weapons
- That would be helpful in learning to detect nuclear detonations.

As a result. CROSSROADS had two experimental programs. The first was to determine nuclear weapon effects on military equipment, such as ships, planes, and supplies, and on animals. The second was to measure weapon phenomena such as blast, heat, radiation, and wave action. The ABLE and BAKER tests were not weapon development tests: in fact, the bombs used were of the same design as the one dropped on Nagasaki, Japan.

The Deputy Task Force Commander for Technical Direction had responsibility for both experimental programs. To accomplish this mission he had two organizations under his control. The first was the Ship Material and Inspection Division, headed by the Director of Ship Material (DSM), and the second was the Instrumentation Division, headed by the Technical Director.

#### EFFECTS ON MELITARY EQUIPMENT

The Ship Material and Inspection Division was responsible for determining weapon effects on military equipment. The organization of the Ship Material and Inspection Division contained both Army and Navy elements (see Figure 13). Responsibilities included preparing the ships, alreaft, equipment, supplies, and animals for each test and determining the exact cause and extent of damage. Decontaminating ships and material after the second test also became a responsibility of this group. Outles included distinguishing between damage caused by the direct effects of the explosion and damage caused by indirect effects such as fires and flooding. Table 4 shows the exposures received by personnel in each of the groups under the DSM.

The DSM set up a two-phase program to accomplish his mission. The first phase was readying the target ships, aircraft, and equipment and included conditioning, loading, instrumenting, and preparing specific equipment, and

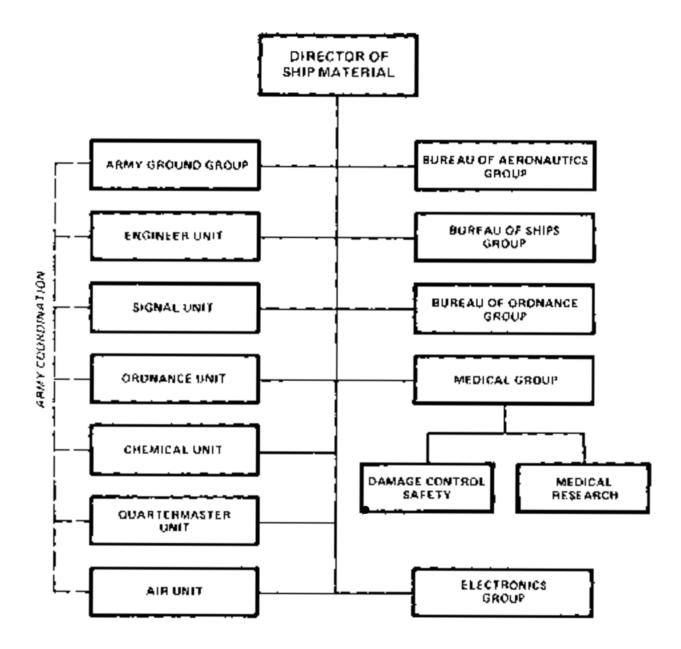


Figure 13. Organization of Ship Material and Inspection Division. Operation CROSSROADS (source: Reference C.9.206).

	No. of Persons Listed	No. of Persons Badged	Exposure Ranges (R)			
Element			0	0.001-0.5	0.5-1	High (R)
Office of the Director	31	 9	3	\$	1	0.590
Агту Блоцр	355	7	ı	6		0.310
Bureau of Aeronaulics Group	15	11	2	9		0.230
Bureau of Ships Group	113	55	12	40	3	0.650
Bureau of Ordnance Group	116	68	20	48		0.420
Medical Group						
Damage Control Safety Section	17	))	5	6		0.220
Medical Research Section	117	17	44	27		0.340
Electronics Group	431	56	23	32	1	0.600

Table 4. Ship Material and Inspection Division recorded personnel exposures, CROSSROADS.

Data taken from Reynolds Electrical and Engineering Company exposure list. Since personnel were not badged all the time, these figures should be recognized as a partial statement of potential total exposure for these groups.

Sources: References C.13.4 and B.0.17.

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inspecting, mooring, and anchoring the target ships before each test. The second phase of his program was the inspection of ships, aircraft, and equipment after each detonation. Detailed instructions were published to provide the necessary guidance to boarding parties who were to inspect the equipment after each shot. Extensive use was made of photography to permanently record "before" and "after" conditions of the ships, aircraft, and equipment. Most of the equipment was packed and shipped to continental U.S. locations for further analysis after Test BAKER (Reference C.9.208, p. 7.3). Six subordinate groups under the DSM were responsible for carrying out the details of the experimental program.

#### Army Ground Group

The exposure of Army equipment was a mission of Commander. Army Ground Group. Under his command were engineer, signal, ordnance, chemical warfare, quartermaster, and air units. Personnel from these units were berthed on USS Wharton (AP-7). They exposed a wide variety of equipment on both tests ranging from ammunition, radar, trucks, petroleum, and tanks, to field stoves, clothing, and medical equipment. Figure 14 shows armored vehicles and other equipment on board USS Saratoga (CV-3) before the test. While most equipment was positioned on board the target vessels, some was placed on nearby islands of Bikini Atoll to provide a better range of effects. Members of the Army Ground Group were evacuated from the Bikini Lagoon on Wharton the day before each test and planned to return the afternoon of each test day. Inspection of equipment after ABLE began on 2 July and was completed by 12 July. The heavy concentration of radioactivity in the lagoon after BAKER slowed inspection efforts. Inspections were not begun until 30 July and were not completed until 10 August. Items on USS Nevada (BB-36) and the concrete drydock, ARDC-13, remained too contaminated to be inspected. The drydock was finally scuttled with all equipment.

Engineer equipment was exposed on three attack transports (APAs). Signal equipment was exposed aboard ships and on nearby islands. Several different items of ordnance equipment were on the decks of four target battleships and on four tank landing ships and one oil barge. Chemical equipment was exposed



Figure 14. Armored vehicles and other Army equipment aboard <u>USS Saratoga</u> (CV-3), ready for exposure to atom bomb, CROSSROADS.

only on shot ABLE. Sample kits of food and clothing were stored in normal storage spaces aboard <u>Nevada</u>. <u>USS Arkansas</u> (BB-33), <u>USS Carteret</u> (APA-70), and <u>Saratoga</u>. Test lots of over 150 items of food and clothing were exposed on the decks of 11 target vessels. Field equipment, lubricants, and fuels were exposed on four tank landing craft and on the concrete drydock. ARDC-13.

Aircraft parts were placed on the decks of target ships. Several types of wing panels made of various materials were secured to the decks. In addition, wing tanks, stabilizers, a P-47 fuselage, an altimeter, and several fire extinguishers were exposed. No aircraft parts were exposed on BAKER test (Reference C.9.208, p. 7.10).

## Bureau of Aeronautics Group

The Navy Bureau of Aeronautics (BuAer) Group was responsible for providing, exposing, and inspecting Navy alreaft and aeronautical equipment. It also provided special instruments to be placed in the Navy FéF aircraft drones to determine radiation intensities and blast effects. Velocity and acceleration gauges were installed on various target aircraft located on the target ships. The BuAer group, berthed on <u>Wharton</u> and <u>USS Avery Island</u> (AG-76), was evacuated with the ships the day before each shot and planned to return to the iagoon the afternoon after each shot. Inspection of equipment commenced on 2 July for ABLE and 30 July for BAKER, Records of F6P drone aircraft reaction to the detonations were removed from the aircraft after they landed at Roi Island, Kwajalein, and aircraft were inspected for damage (Reference C.9.208, pp. 3.5) and 7.8).

## Bureau of Ships Group

This group was responsible for preparing target ships (and certain nontarget ships) to determine effects of the detonations on the ships and carrying out decontamination activities. The group prepared Op Plan 1-46 Annexes W and X entitled "Ship Preparation Plan" and "Reboarding and Inspection Plan," respectively. Readying the target ships for the tests took place initially in shipyards at Philadelphia; Terminal Island. Long Beach, California: San Francisco. California; Mate Island, Vallejo. California; Bremerton. Washington: and Pearl Harbor. Hawaii. Target ship crews did much of this work, both et Pearl Harbor and on site at Bikini.

Members of the Bureau of Ships (BuShips) Group were berthed on <u>Wharton</u>. They were aboard that ship when it sortied from Bikini the day before each test and returned after each test. Ship inspection began on 2 July after ABLE and on 26 July after BAKER. Interim repairs after ABLE to prepare ships for BAKER were completed by 5 July: however, ship inspections continued for several more days. The ship inspection program was broken down into six categories: hull, ship stability, machinery, electrical, electronics equipment, and measurement of any change in magnetic fields within the ship. Inspection of ships after BAKER was hampered by radioactivity on the ships and in the lagoon. Five attack transports, one destroyer, two infantry landing craft, and four submarines were reboarded and manned in August and September and were sailed back to U.S. ports. The remaining target ships, however, were too contaminated to be boarded except for short visits and were towed to Kwajalein during August and September. By 26 September. Bikini Atoll was cleared of the target fleet and all personnel were evacuated. Eight target ships and two target submarines were subsequently towed from Kwajalein to Pearl Harbor. Six of these were towed to U.S. west coast ports in 1946 and 1947 for further radiological examination (Reference C.9.208, pp. 3.5) and 7.5). The disposition of the target fleet is summarized in Chapter 9.

### Bureau of Ordnance Group

The Buteau of Ordnance (BuOrd) Group was responsible for obtaining and exposing naval ordnance equipment and for appraising the damage after each detonation. The group was organized into six sections: fire control, gun mounts, explosives, aviation ordnance, underwater ordnance, and armor metallurgy. The group was berthed on Wha<u>rton</u>.

Its personnel left Bikini Lagoon the day before each shot and reentered after each shot. Inspection of equipment after ABLE shot was easily and quickly accomplished, but high levels of radioactivity after BAKER severely restricted activities (Reference C.9.208, pp. 3.52 and 7.10).

#### Medical Group

The Medical Group was comprised of two sections: Damage Control Safety Section and Medical Research Section. Personnel of the Damage Control Safety Section were to reboard target ships with the initial boarding party and evaluate and reduce nonradiological hazards to boarding parties. Hazards that had to be addressed included falling objects, slippery decks, weak ladders, drowning, fires, steam, electrical shock, chemical hazards, and ammunition hazards. The personnel trained extensively, and in turn trained members of designated boarding parties both on the U.S. west coast and at Bikini. There were no incidents on either test day. This section was betthed on USS Haven (AH-12) (Reference C.9.208, p. 3.52).

The Medical Research Section was responsible for the biological research program, which involved exposing animals, seeds, bacteria, and medical and dental materials, and for studying the resulting damage and injury. Principal animals used were pigs, goats, guinea pigs, rats, and mice.

For ABLE, the animals and other biological samples were placed on <u>USS</u> <u>Geneva</u> (APA-86), <u>USS Niagara</u> (APA-87), <u>USS LST-133</u>, LCI-327, and LCI-329. Coats in exposure position are shown in Figure 15. They were retrieved by section personnel operating from USS <u>Burleson</u> (APA-67) at approximately 1600 on 1 July.

For BAKER, the animals and samples were on USS <u>Gasconade</u> (APA-85). USS <u>Briscoe</u> (APA-65). USS <u>Catron</u> (APA-71). and USS <u>Bracken</u> (APA-64). Section personnel could not retrieve animals and samples from <u>Bracken</u> until 1351 on 28 July (D+3). At 1447 the same day, about one-half the animals were removed from <u>Catron</u>. Daily radiation tolerances prohibited the personnel from continuing to work on <u>Catron</u>. On 29 July, animals and samples remaining on <u>Catron</u> and on <u>Briscoe</u> were recovered. On 30 July, animals and samples on <u>Gasconade</u> were recovered (Reference C.9.206, pp. VI-B-12 and VI-D-30 through D-44: Reference C.9.208, pp. 3.54 and 25.3).

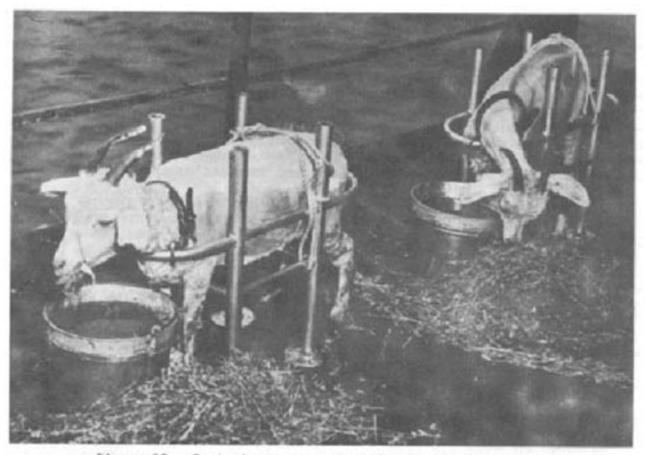


Figure 15. Goats in exposure position on target ship deck during CROSSROADS.

### Electronics Group

This group and the 013D Electronics Group in the Technical Director's organization (see the section on Nuclear Weapon Phenomena below) were one and the same. They performed a dual function in working for both the DSM and the Technical Director.

As planned initially in January 1946, this group's primary responsibility was to determine the damage to electronic equipment aboard ships after exposure to each detonation. After a series of meetings in February 1946, the group's responsibilities were significantly expanded. It took over electronic equipment responsibilities from BuAer and the Army Signal Corps. It assumed full responsibility for execution of electronics instrumentation projects as specified in the Instrumentation Plan (Annex G. Op Plan 1-46) and the Communications and Electronic Plan (Annex C, Op Plan 1-46). It carried out most of the studies associated with the electromagnetic propagation program and provided support to wave motion, blast pressure, shock, drone boat, and telemetering projects. As a result of all these added responsibilities, the size of the group was expanded and liaison officers from several other groups were assigned. Also because of these added responsibilities, the group became accountable to the Technical Director, although it maintained close liaison with the DSM. Specific projects included preparation and inspection of shipboard electronic equipment: provision of technical communications for the flagship <u>USS</u> <u>Mount McKinley</u> (AGC-7), press ships, and instrumentation ships: electromagnetic propagation studies and provision of sonobuoys for pressure recording; telemetering technical data from certain target ships: television recording of wave motion and wave heights: provision of timing signals for most projects (excluding bomb detonation timing signals); and provision of electronics equipment necessary for operation of the drone boats. The types of shipboard electronic equipment that had to be prepared and inspected included radios, radiosondes, radars, Identification Friend or Foe (IFF) systems, sonars, radar repeaters, homing devices, radar beacons, and interior communications systems.

The Electronics Group was berthed aboard <u>Avery Island</u>, <u>USS Coasters Harbor</u> (AG-74) was designated as an electronics repair ship for this group. Group personnel were evacuated from Bikini Lagoon the day before each shot and returned to the lagoon after each shot. For ABLE, group members were not part of initial boarding teams, but began their inspections when general reboarding was authorized. After BAKER, radioactivity delayed most inspections until mid-August. In fact, on 7 August the Target Inspection Section of the Electronics Group was reberthed aboard <u>USS Fuiton</u> (AS-11), and <u>Avery Island</u> returned to the United States with most of the Electronics Group personnel. The Instrument Repair Unit also remained behind aboard <u>Wharton</u> and <u>Haven</u> to repair and maintain radiac instruments (Reference C.9.208, p. 3.43; Reference C.9.196, pp. 192-225).

#### Army Air Group (Task Group 1.5)

Although not under the control of the DSM. Task Group (TG) 1.5 assisted the DSM in determining the bombs' effects on in-flight aircraft. In addition to its several missions as TG 1.5, this group catried out blast and radiation experiments using B-17 drone and B-29 and F-13 aircraft. The drones were equipped with flight analyzers that recorded acceleration, airspeed, and overpressure. Some data were telemetered by a television arrangement. Upon landing at Enewe-tak, the instrumentation was removed for analysis. The drones were monitored for radiation and inspected for damage. The B-29 and F-13 aircraft had similar instrumentation except for the television system. Additional information on TG 1.5 is found in Chapter B.

Table 4 is a tabulation of badging and exposures of personnel in the various groups of the Ship Material and Inspection Division. Since personnel were not badged all the time, these figures should be recognized as a partial statement of potential total exposure for these groups. Dose reconstruction techniques, discussed in Chapter 12, provide a way of estimating total dose figures.

#### NUCLEAR WEAPON PHENOMENA

The program to measure and record the various effects produced by the ABLE and BAKER nuclear detonations was the responsibility of the Technical Director. Who headed the Instrumentation Division. The Instrumentation Division was responsible for measuring and recording weapon diagnostic data (blast, heat, radiation, etc.). The plan to measure and record the weapons' effects

was broken down into numbered programs, categorized and described in Table 5. For control reasons, the Technical Director set up an administrative organization (see Figure 16) and a functional organization (Figure 17). The administrative organization was used for personne) assignments. Personnel rosters were maintained using this organizational breakdown. The functional organization was used for grouping experimental projects. Table 5 and the functional organization in Figure 16 show the similarity between the programs. Over 130

Program	Title	Responsible Groups
I	Bomb Preparation	Los Alamos Laboratory
II	Blast Pressure and Shock	Navy Bureau of Ordnance Los Alamos Laboratory Navy Bureau of Ships Army Air Forces Navy Air Group
111	Wave Notion Oceanography	Smithsonian Institution U.S. Geodetic Survey U.S. Fish and Wildlife Service Woods Hole Oceanographic Institution
Ιv	Propagation of Electromagnetic Waves	Navy Bureau of Ships Army Air Forces Los Alamos Laboratory National Bureau of Standards Federal Communications Commission
٧	Radiological Safety	Los Alamos Laboratory
¥1	Radiometry	Army Air Forces Navy Sureau of Ordnance
VEL	Radiation Measurements	Los Alamos Laboratory
¥1 [ ]	Remote Measurements	U.S. Geodetic Survey Carnegie Institule Wational Bureau of Standards Naval Research Laboratory David Taylor Model Basin U.S. Weather Bureau
۲۱	Technical Photography	Army Air Forces U.S. Navy Los Alamos Laboratory

Table S.	Instrumentation	Division	programs	and	responsible.	groups,
	CROSSRDADS.				-	

Source: References C.9.209 and C.9.210.

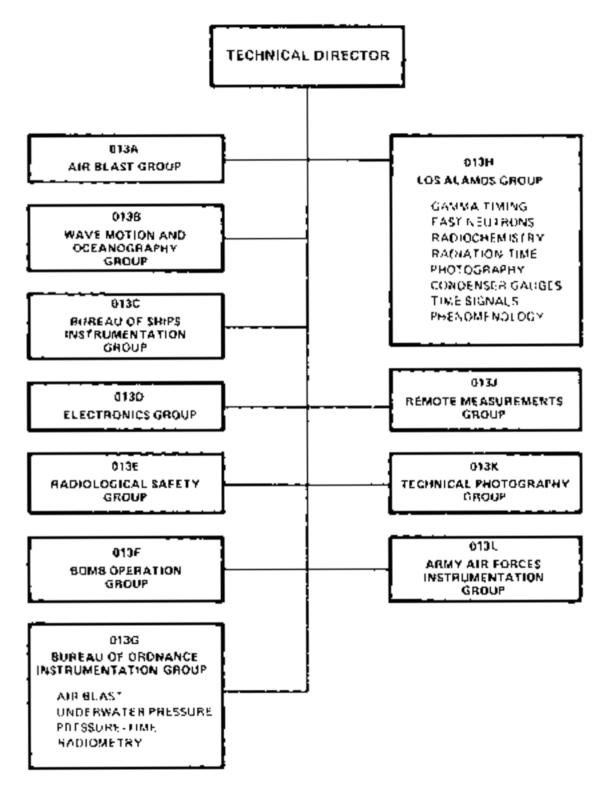


Figure 16. Instrumentation Division (administrative organization), CROSSROADS (source: Reference C.9.210, N 138A).

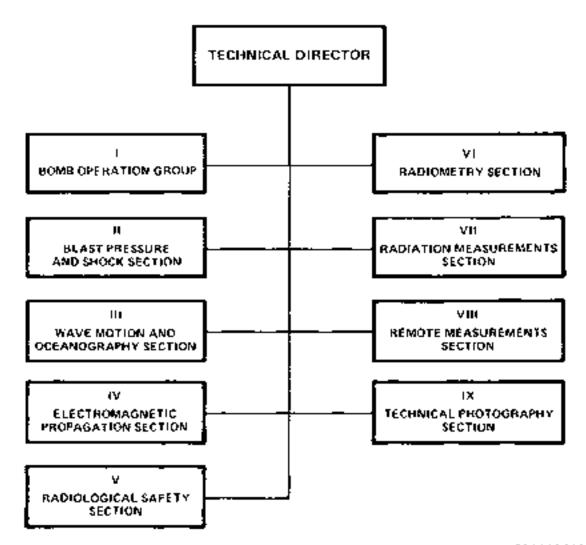


Figure 17. Instrumentation Division (functional organization), CROSSROADS (source: Reference C.9.210, N 1388).

projects were associated with Programs [] through IX. Appendix C lists these projects by title and shows which group in the Instrumentation Division was responsible.

Table 6 presents exposure information for the groups in the Instrumentation Division. The Remote Measurements Group is not shown in the table because its personnel were not present in the Bikini area and had no one badged during CROSSROADS. The highest exposures recorded were for personnel in the Radiolog ical Safety Group. These personnel monitored the contaminated ships and other areas to determine dangerous radiation levels. The accumulated high individual exposure in this group was 3.720 R. This monitor was badged six days.<sup>4</sup>

Since personnel were not badged all the time, these figures reflect only a part of the total potential exposure. Nose reconstruction techniques discussed in Chapter 12 can be used to produce an estimate of total dose.

				{ xpo	sure Ra	nges (R	:)	
Element	No. of Persons Listed	No. of Persons Badged	0	0.001- 0.5	0.5-1	1-1.5	Over 1,5	High (R)
Diffice of the Director	3	1		1				0.050
Air Blast Group	9	3	1	2				0.120
Wave Motion and Oceanography Group	93	30	19	ון				0.180
BuShips Instrumentation Group	58	36	3	27	5			0.990
Electronics Group <sup>b</sup>	411	56	23	32	١			0.600
Radiological Safety Group	436	316	848	181	33	7	7	3.720
Bomb Operation Group	70	3	3					0
Sureau of Ordnance Instrumentation Group	208	47	24	23				0.470
Los Alamos Laboratory Group	70	12	6	6				0.330
Tech Photo Group	36	9	6	2	ı			0.820
Army Air Forces Instru- mentation Group <sup>C</sup>	١							D

Table 6. Instrumentation Division personnel exposure, CROSSR0A05.ª

## Noles:

<sup>a</sup>Data taken from Reynolds Electrical and Engineering Company List. Since personnel were not badged all the time, these figures should be recognized as a partial statement of potential exposure for these groups.

 $^{\rm b}{\rm Same}$  as the Electronics Group in Ship Material and Enspection Division.

<sup>C</sup>Personnel almost entirely supplied by Army Air Group, Task Group 1.5.

Sources: References C.13.4 and B.O.17.

The nine programs managed by the Instrumentation Division are discussed in the following paragraphs. Where appropriate, individual projects within each program are discussed.

Program I -- Bomb Preparation

Agency:

Los Alamos Laboratory

<u>Operations</u>: The bomb for ABLE was prepared at Kwajalein and loaded onto the B-29 drop aircraft at Kwajalein airfield. The bomb for BAKER was prepared on Kwajalein and on medium landing ship LSM-60 in Bikini Lagoon. It was placed in a waterproof caisson and lowered 90 feet (27 meters) under the LSM.

<u>Staffing</u>: Seventy Los Alamos Laboratory employees worked on this program. The radioactivity of the nuclear components of the bombs presented a very low risk of exposure. Personnel in this program were not required for reentry operations so they should not have been exposed to significant amounts of radiation. According to exposure records only three individuals were badged (see Table 6).

Program II -- Blast, Pressure, and Shock

Agencies: Los Alamos Laboratory Navy Bureau of Ordnance (BuOrd) Navy Bureau of Ships (BuShips) Army Air Force Navy Air Group Air Blast Group (013A)

Operations: This program had 28 projects, some with several subprojects (see Appendix C). Except for Project II-12, which measured fireball growth using cameras, all these projects were associated with pressure, blast, and shock measurements. A variety of self-recording airblast gauges were placed on Bikini islands, in the lagoon, on target ships, and on aircraft aloft in the area above the target area. Condenser gauges were dropped from two B-29 aircraft just before each detonation and they transmitted readings to recorders in the two B-29 aircraft. Water-shock gauges were also used. All B-29, F-13, and B-17 aircraft participating in either shot carried instrumentation also.

<u>Staffing</u>: Personnel from the Air Blast Group, Los Alamos Laboratory Group. Electronics Group, and the BuOrd Instrumentation Group worked on projects in Program II. Although there were probably more. SI personnel have been identified with this project from existing records, 35 of whom were badged. The highest exposure of these 35 was 0.99  $\Re$  for an individual working on Project II-18 who got all of his exposure the first week in August.

Placement of gauges in aircraft, target ships, islands, etc. should have provided little or no exposure to project personnel. Removal of gauges after ABLE should have been relatively easy as radioactivity was limited to a few target ships and decayed rapidly. BAKER, however, contaminated islands due north of the deconation, the lagoon, and most of the target ships. Gauge removal was closely monitored by radiological safety (radsafe) personnel.

Project Report: Reference C.9.209, Enclosure C.

Program (1) - Wave Motion Oceanography

Agencies Smithsonian Institution U.S. Geodetic Survey U.S. Fish and Wildlife Service Woods Hole Oceanographic Institution

<u>Operations</u>: This program had 20 separate projects to measure and record wave motion and to study detonation effects in the area of Bikini Lagoon. Some instrumentation was placed on the bottom of the lagoon, some suspended in the water from target ships, and some on nearby islands.

Staffing: Program III personnel were from the Wave Motion and Oceanography Group of the Instrumentation Division. Ninety three personnel were assigned. 30 of whom were badged. Recorded exponeres during the periods they were badged were all less than 0.5 K.

Removal of instrumentation from target ships, particularly after BAKER, exposed personnel to radioactivity on the ships. Removal of instrumentation from the Lagoon bottom also exposed recovery personnel to some radiation after BAKER since the water in some areas of the lagoon was radioactive. However, recovery times apparently were relatively short and this minimized radiation exposure. Some islands were also contaminated after PAKER and instrument recovery there created exposure potential depending on recovery date and stay time.

Project\_Report: Roference C.9.209. Enclosure P.

Program 1V -- Propagation of Electromagnetic Waves

<u>Agencies</u>: Los Alamos Laboratory Army Air Forces (AAF) Electronics Group National Bureau of Standards (NBS) Yedecal Communications Commission (FCC)

Operations: There were 18 separate projects in Program IV. Radars and radios, some operating at detonation time, were placed on selected islands at Enewetak, Kwajalein, Bikini, and on selected target ships. Television cameras were installed on B-17 drones and controllers. Two projects provided timing and firing signals for BAKER. Four projects measured electromagnetic properties from remote locations in Hawaii, Germany, Manila, Alaska, and the United States. One project telemetered air- and water pressure readings from target ships to receivers on Avery Island.

Staffing: Personnel from the Electronics Group of the Instrumentation Division accomplished all the projects in this program except for IV-9 through IV-I3, which were done by Los Alamos Laboratory and the Army Air Forces. NBS and FCC personnel involved were not in the Bikini area. This flec tronics Group was the same as that in the Ship Material and Inspection Division under the DSM. The highest recorded exposure in the Electronics Group was 0.6 R.

Since the experiments measured interference with electromagnetic waves at and after detonation time there was no urgency to recover equipment in radioactive areas such as the Bikini islands and target ships.

Project Report: Reference C.9.209. Enclosure G.

Program V -- Radiological Safety

Agency: Radiological Safety Group

Operations: There were 12 projects in this program (see Appendix C). The first eight involved radsafe monitors who measured radioactivity in the air, water, and on ships to obtain data on radiation in order to protect personnel. The eight monitor groups were: destroyer, seaplane, boat, board ing party, fixed base, gunboat, Bikini Lagoon channels, and airborne. Monitoring instruments used were: 275 Victoreen Geiger counters (Model No. 263), 150 Victorcen ionization chambers (Model No. 247), 12 alpha meters, and an unknown quantity of self-reading dosimeters. All monitors also work film badges whenever there was a probability of encountering radioactivity. Film badges were normally exchanged daily. All monitor groups had Geiger counters and ionization chambers except the Bikini Lagoon Channel Group which used battery-operated, deep channel counters with submersible probes Project 9 (Photometric Film Badges) measured radiation at various locations in the target array and recorded radiation received by all who wore film badges. They used 5,080 sulfur and calcium triphosphate capsules in addition to a large number of film badges. Projects 10 and 11 measured gammaradiation over a period of time on new contarget ships. Project 12 per sonnel measured total gamma intensity on - veral target ships.

<u>Staffing</u>: As shown in Table 6, 436 personnel of the Radsafe Group have been identified (Reference B.0.19). Of these 316 were badged at least one time (see Table 21 for badging sub-ary). Personnel in all 12 projects on the Radsafe Program had a high potential for exposure because of their assigned duties. Monitors who related for ships with boarding parties (Project 4) after Test BAKER accumulated the highest exposures. The highest individual accumulated recorded expose is 3.720 R. Most of those badged in Program V were military personnel is imponitoring duties.

Project Report: Reference C.9.209, Enclosure J.

Program Vi -- Radiometry

Agencies: Navy Bureau of Ordnance (BuOrd) Atmy Air Forces (AAF)

<u>Operations</u>: Measurement of the bombs' radiant energy was attempted from several locations. For ABLE, instruments were installed on one ship 18 mmi

(33 km) from the detonation and on an aircraft flying 18 rml (33 km) from the detonation. For BAKER, instruments were installed on a ship positioned 10.9 nml (20 km) from the detonation and spectroscopes were placed on an aircraft flying 7.2 nmi (13 km) from the burst.

<u>Staffing</u>: BuOrd Instrumentation Group personnel stanned the projects in this program with some help from AAF. Potential for exposure of Program VI personnel was quite low. Aircraft and ships involved remained clear of radioactive areas in and downwind of the Bikini Lagoon. BuOrd Instrumentation Group personnel had low exposures as can be seen from Table 6. Nost personnel working in Program VI were not badged and those that were had readings less than 1.0 R.

Project Report: Reference C.9.209. Enclosure H.

Program VIL -- Radiation Measurements

Agency: Los Alamos Laboratory

Ope<u>rations</u>: The first of the three projects in this program was the measurement of fast neutrons on ABLE test by placing sulfur samples on several target ships.

The second was measurement of gamma-ray emissions from BAKER detonation. During this project, gamma-ray measurement signals were transmitted from the bomb case to <u>USS Cumberland Sound</u> (AV-17) just before the transmitters were destroyed.

The third project was collection and measurement of air and water samples to determine the efficiency of the detonations. This included the use of drone aircraft (B-17 and F6F) and drone boats to obtain radioactive air and water samples.

The Army B-17 drones were guided from Enewetak to Bikini by B-17 controller aircraft. On ABLE they sampled at 12,000, 18,000, 24,000, and 30,000 feet (3.66, 5.49, 7.32, and 9.14 km) between 6 and 15 minutes after the detonation. On BAKER they sampled at 6,000 and 10,000 feet (1.63 and 3.05 km) between 5 and 10 minutes after the detonation. Each B-17 drone aircraft had a filter box mounted in place of its top turtet and a large inflatable tubber bag in its bomb bay. The air filter unit with its special filter paper was designed to filter 90 cubic feet (7.5 cubic meters) of air in 30 seconds. The rubber bag was opened on command of the controller in the B-17 control aircraft when the drone entered the cloud. It automatically closed 30 seconds later, capturing 90 cubic feet (7.5 cubic meters) of air. The drones were guided back to Enewetak where they were landed by ground controllers. Los Alamos Report No. 613 (Reference C.1.1) describes removal of the filter unit:

The AAF filter unit was fixed to the top turret of a drone B-17. A lanyard ran from the unit down along the outside fuselage and ended in a handle fixed near the door of the plane. One sharp pull on the lanyard brought the filter unit tumbling down. Each door of the unit itself was fitted with a short lanyard. One sharp pull of this lanyard, and the door teaped off in an amazing shower of springs and bolts. The filter papers sandwiched between their screens could then be picked up. a few wires snipped to separate the screens, and the paper removed.

Figure 18 shows a drone B-17 landed at Enewetak after shot ABLE. A monitor is shown walking away from the rubber bag in the background. The bag had been dropped from the bomb bay into a wheeled contrivance and was pulled away from the B-17 with long ropes. The top filter unit is visible on the top of the B-17 fuselage. Los Alamos personnel removed the filter papers from the boxes and flew to Kwajalein on the waiting C-54 with the filter papers and the large rubber bags filled with air samples. The samples were analyzed at Kwajalein.

Navy F6F drones were guided to Bikini from the carrier USS Shangri-La (CV-38) by drone control F6Fs. For ABLE, three drones sampled at 10,000, 15,000, and 20,000 feet (3.05, 4.57, and 6.1 km) approximately 8 to 15 minutes after the detonation. For BAKER, three drones sampled at 5,000, 9,000, and 14,000 feet (1.52, 2.74, and 4.27 km) 5 to 10 minutes after the detonation. After the sampling was complete they were guided to the island of Roi-Namur in Kwajalein Atoll and were landed there by ground control pilots. The F6F drones had a single unit with filter paper mounted under the left wing. A 10-foot (3.05-meter) pole with a hook was used to unhook and drop the unit from the wing. Six bolts were then removed on the doors



Figure 18. Air sampling gas bag and drone B-17 at Enewetak Island following shot ABLE, CROSSROADS.

by specially adapted 10-foot (3.05-meter) poles. The doors were then pulled off with another special 10-foot (3.05-meter) pole. The filter paper and securing screens were attached to the doors and came out of the unit with the doors. The filter papers were picked up with long-handled tongs (Figure 19) and placed in special lead receptacles. They were then flown by C-54 to Kwajalein for analysis.

Drone boats from <u>USS Begor</u> (APD-127) collected radioactive water samples throughout the target array. Radioactive samples were taken from <u>Begor</u> to Kwajalein and then to Los Alamos Laboratory for analysis.

<u>Staffing</u>: Los Alamos Laboratory supplied the personnel for the projects in this program. Removal of sulfur samples from target ships on ABLE test would have exposed men to low-level radiation on those ships that were near surface zero, viz. <u>Sakawa</u> (a captured Japanese cruiser), <u>USS Crittenden</u> (APA-77), <u>USS Carlisle</u> (APA-69), and <u>USS Arkansas</u> (EB-33) (Reference C.9.210, p. N-212). Measurement of gamma rays at detonation time for BAKER should not have created any radiation exposure to personnel. Removal of radioactive air and water samples from planes and boats was a very sensitive operation with a high exposure potential. Only 12 of 70 personnel in

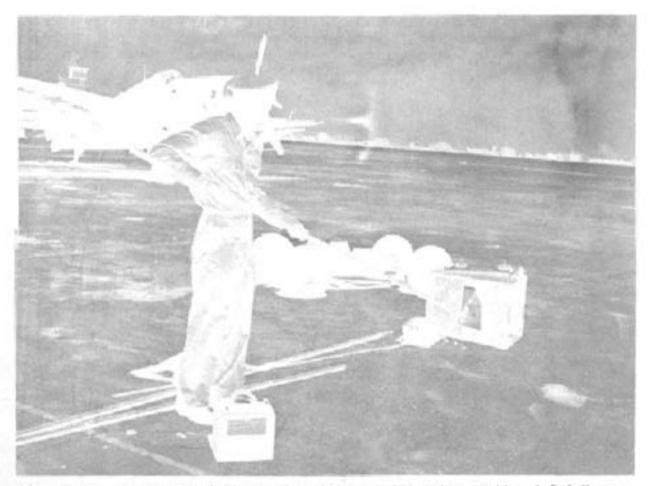


Figure 19. Removal of filter papers from the F6F filter units at Roi-Namur Island following shot ABLE, CROSSROADS.

the Los Alamos Laboratory Group were badged and thelt exposures were very low (see Table 6).

Project Report: Reference C.1.1 (Los Alamos Laboratory Report No. 613, November 1946).

Program VIII -- Remote Measurements

Agen <u>cie</u> s:	U.S. Coast & Geodetic Survey Carnegie Institute National Bureau of Standards Naval Research Laboratory David Taylor Nodel Basin	University of Texas Bartol Foundation Mt. Wilson Observatory Evans Signal Laboratory Federal Communications Commission
	-	
	U.S. Weather Bureau	Poget Sound Naval Shipyard
	University of Washington	Army Air Forces (AAF)

<u>Operations</u>: This program consisted of 18 projects. Experiments were conducted at sites around the world to measure changes produced by the detonations. Measurements were made of tides, wave action. atmospheric reflectivity. atmospheric pressure. atmospheric ionization, atmospheric noise, radioactivity, and long-range radio waves. Only Project 14 used locations in the Bikini area, specifically Eneu Island and <u>USS\_Kenneth</u> <u>whiting (Av-14)</u>.

<u>Staffing</u>: Organizations involved in each of the projects are listed above. Names of individuals associated with these organizations cannot be separately identified. Except for Project 14, which had instrumentation on Eneu Island and <u>Whi</u>ting, exposure potential was extremely low for everyone working with this program. The Eneu site was not contaminated after ABLE but the beach was contaminated after BAKER. Eneu was visited on 25 July (BAKER day) and all experiments removed during the afternoon. Three days later it was radiologically cleated and reopened for troop use.

Project Report: Reference C.9.209. Enclosure K.

Program [X -- Technica] Photography

<u>Agencies</u>: Los Alamos Laboratory Army Air Porces (AAF) U.S. Navy Technical Photography Group

<u>Operations</u>: There were 19 projects in Program IX associated with technical photography. Project 1. operated by Los Alamos Laboratory. used high-speed cameras to record the growth tate of the ABLE fireball. Half of the cameras were in a tower on Bikini Island and half in a tower on Eneu Island. Projects 2 through 7 used cameras mounted in six camera towers to observe water waves, ship motion, burst location. Light intensity, and record damage. There were two camera towers each on Bikini. Eneu. and Aomen Islands. These six projects were operated by the Technical Photography Group of the Instrumentation Division. Projects 8, 9, and 10 consisted of technical photography from AAF planes. Cameras were mounted in B-17 drones. C-54s,

and F-13s. Pictures were taken of fireball development, nuclear cloud formation, the target area, and radar scopes inside the aircraft. Projects II through 14 consisted of technical photography from U.S. Navy aircraft. A Variety of cameros were installed in PBMs, TBMs, F6Fs, and F6F drones to photograph wave notion, target array, target damage, and detonation effects on ships in real time. Project 15 used 20 cameras placed on target ships and nearby islands for shot ABLE and 24 cameras on target ships and nearby islands for shot BAKER to observe ship reaction to the detonation. Project 16 consisted of mounting high-speed cameras in a C-54 to measure the ABL6 fiteball growth. Project 17 consisted of mounting 50 icaroscopes on nine observer ships to observe boob flash intensities (Reference C.9.190. p. 207). Project 18 mounted two drum spectographs in a camera tower on Breu to record the light's spectrum as a Eunction of time. Projects 15 through 18 were conducted by the Technical Photography Group of the Instrumentation Division. Project 19 used a high-speed camera on Bikini to photograph ABLE fireball development. This project was accomplished by the BuOrd Group of the Instrumentation Division.

<u>Staffing</u>: Personnel in the Technical Photography Group consisted of officers and enlisted men from the U.S. Navy and civilians. Of the civilians assigned, at least one was from Los Alamos Laboratory. The Navy Photographic Unit was aboard <u>USS Saidor</u> (CVE-117). In addition to the Technical Photo Group, the Army Air Task Group, TG 1.5, had one task unit devoted completely to photography. Army Air Photo Unit. TU 1.5.2, with several photographic aircraft, provided substantial support to this program.

For ABLE there was little chance for exposure on any of the projects except for Projects 6, 13, and 15, where cameras had to be recovered from B-1) and F6F drones and target ships. The drones were contaminated: however, none of the target ships with cameras were contaminated on shot ABLE. For BAKER, recovery of several projects created an exposure potential. Projects 2 through 7 required recovery of film from contaminated islands around the lagoon after BAKER. Projects 8 and 13 required recovery of film from contaminated B-17 and F6F drones. Project 15 required recovery of film from contaminated target ships after BAKER. Projects 18 and 19 required recovery of film from Eneu and Bikini, the beaches of which were contaminated after BAKER.

## CHAPTER 4

## TEST OPERATIONS

CROSSROADS was primarily a sea-based operation. The islands of Bikini Atoli\* were used as sites for instrument locations and as recreation areas. However, a Navy Construction Battalion had quarters for its men on Bikini Island. Joint Task Force 1 (JTF 1) personnel lived at Kwajalein. Enewetak, and aboard ships in Bikini Lagoon. They commuted to their work sites in the target array or at island-based measurement sites.

In Test ABLE, the weapon was dropped from an Army Air Forces B-29 (nicknamed "Dave's Dream") based at Kwajalein. The bomb burst in the air 520 feet (158 meters) over the target ships. In the BAKER test the weapon was suspended in a waterproof container 90 feet (27 meters) below LSM-60, anchored at the center of the target fleet. A third test, to have been called CHARLIE, would have been a deep underwater test, but it was cancelled after Test BAKER.

The target fleet was unmanned for both tests and was anchored in the northeastern area of Bikini Lagoon off Bikini Island. For ABLE 22 landing craft and for BAXER 24 landing craft were beached on the lagoon side of this island. simulating boats in an amphibious operation. Military equipment (including airplanes), animals, and scientific instruments were aboard the target ships. Two anchored seaplanes were also part of the target fleet.

The manned JTF 1 support ships withdrew from the lagoon before the tests and remained east of the atoll or were at other atolts until it was safe to reenter the lagoon. Nontarget small craft were moored (unmanned) in the lagoon off Eneu Island about 5 nml (9.3 km) south of the test area. Among these were several drone boats equipped to be remotely controlled. After each detonation the drones were guided by aircraft and <u>USS\_Begor</u> (APD-127) to areas in the target array to collect water samples and take radiation readings. After the water samples were collected, the drones were guided back to <u>Begor</u> where they were hosed down to remove radioactive contamination (Figure 20) and the samples removed. After each test the drones were followed by six patrol motor gunboats (PGMs) and twenty landing craft (LCPLs) with rediation monitors aboard. Rediation intensity measurements were sent by radio to the Radsafe Control Center. From this information and that gathered from alccraft equipped with radiation detectors, it was determined when a safe reentry to the lagoon by the main body of the fleet could be made.

## PRE-TEST OPERATIONS

Preparation for the tests began in January 1946 when the atoll was surveyed by U<u>SS Allen M. Summer</u> (DO-692) and <u>USS Bowditch</u> (ACS-4). The survey was finished in April.

The islands of Bikini Atoli and their various transliterations and synonyms are listed in Appendix D.

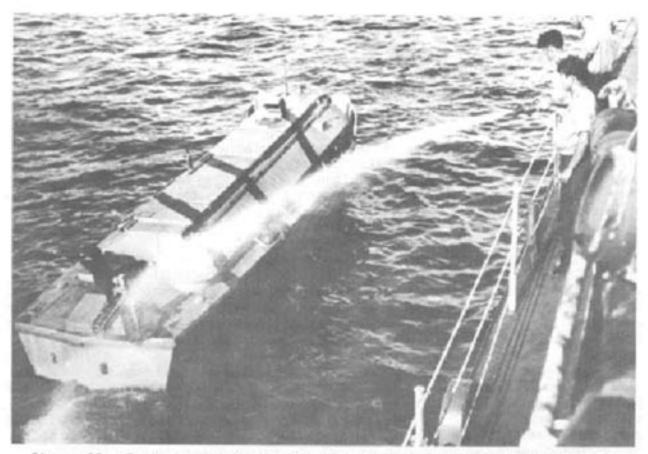


Figure 20. Drone boat being washed down before radioactive water samples were removed, CROSSROADS.

On 7 March 1946, 167 Bikinians embarked aboard <u>USS LST-1108</u> and were taken to Rongerik Atoll. At the same time the Navy 53rd Construction Battalion began arriving to build the various phototowers, instrumentation sites, workshops, and recreation facilities on the islands of the atoll. One hundred tons of dynamite were used to clear coral heads in the lagoon. Five naval mines were discovered and disposed of during March.

Movement of participating ships from eastern U.S. shipyards and ports toward Bikini also began in March. Movement from closer ports began later, and by mid-May there were over 100 CROSSROADS-bound ships stopping over in Pearl Harbor on their way to Bikini. Interior spaces of some support ships were modified as laboratories or machine shops, and <u>USS Burleson</u> (APA-67) was being converted to a "great dirtless farm" (Reference A.1), a living place for the experimental animals that were used during CROSSROADS.

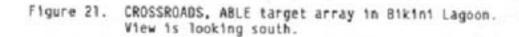
The target ships also required special preparation. For Test ABLE, 93 target vessels were assembled. For Test BAKER, 92 target vessels were arrayed. The target fleet was led by older U.S. capital ships like the famous <u>USS Saratoga</u> (CV-3) and the old battleships <u>USS Nevada</u> (BB-36). <u>USS Pennsylvania</u> (BB-38), and <u>USS New York</u> (BB-34). The German battle cruiser <u>Prinz Eugen</u> and two major captured Japanese ships, the battleship <u>Nagato</u> and the cruiser <u>Sakawa</u>, were also targets. All target vessels were accurately moored and made ready for the tests. This involved a great deal of work by Task Group (TG) 1.2 in making the ships watertight so that pumping would not be required to keep them afloat. Many of the target ships could be classed as "war weary." making this task difficult. For the sake of the experiment, the ships were to be in as near to fighting condition as was reasonable, which included loading them with ammunition, torpedoes, fuel, radar equipment, etc.

The target ships also required close pretest inspection since the aim of the tests was to measure the effects of the nuclear detonations. This was done by inspection teams of the Ship Material and Inspection Division and ships' crews and was documented extensively with photographs. Instrument placement aboard these vessels also was extensive. Compartments in nearly every target vessel were inspected and the condition recorded before and after each test. An aerial view of the target array is shown in Figure 21.

### ABLE OPERATIONS

By mid-June the task force was in place. <u>Burleson</u>, with its cargo of experimental animals, was one of the last arrivals (14 June). Several small-scale rehearsals and one major rehearsal on 24 June 1946 (Queen Day) preceded the test. For the Queen Day rehearsal a number of non-self-propelled or slow-moving vessels were evacuated to Kwajalein, some not to return to Bikini until after ABLE. Projected ABLE Day remained 1 July.

At the morning weather conference on 30 June 1946, favorable weather was forecast for the following day, so Commander JTF 1 (CJTF 1) set 0830, 1 July, as shot time. At the evening weather conference, conditions still appeared



favorable. Nowever, fairly heavy cloud cover was reported early on the morning of 1 July, and shot time was changed to 0900.

Byacuation of task force support ships began soon after CJTF I set the hour for ABLE. All destroyers except <u>USS Moale</u> (DD-693) got underway and were clear of the lagoon by early afternoon on 30 June, Most of the support ships of TG 1.2 were out of the lagoon shortly thereafter, except for the TG 1.2 flagship <u>USS Fall River</u> (CA-131) and three small support ships. Throughout the afternoon the vessels of TG 1.8 cleared the lagoon. Three tugs towed barges to Kwajalein and <u>USS Chowanoc</u> (ATF-100) towed YO-130 to the open sea, more than 20 nmi (37 Xm) northeast of Bikini Atoll. Small craft had evacuated task force personnel from Enidrik and Eneman islands and transferred them to <u>Fall River</u>, which then left the lagoon along with the smaller ships of TG 1.2. Ten ships remained in the lagoon after 1800 hours.

Preparations ashore had included removal of the roofs of buildings to prevent blast damage and removal of the pontoon-supported docks and causeways that had been installed on the islands. Machinery such as refrigerators, generators, and water-distilling units had been covered by tarpaulins.

<u>USS\_Chilton</u> (APA-38) evacuated 691 nonessential U.S. personnel and natives from Enewetak before the test, Provision had been made to evacuate essential U.S. personnel on Enewetak if necessary, and five C-54 air transports were at Enewetak for this purpose. The Marshallese on Rongerik to the east had been taken aboard <u>USS\_LST-989</u> in case evacuation was necessary there.

Two additional C-54s were sent from their Kwajalein base on 30 June. one to Enewetak and one to Roi Island. These were scheduled to receive the radioactive cloud samples to be collected by the B-17 drone samplers based at Enewetak and the F6F drone samplers returning to Roi following the shot.

At 0512 on i July. PGM-23 had all task force personnel from Iroij. Nam. and Aomen islands embarked and was underway for the fleet assembly area. At 0524 USS Kenneth Whiting (AV-14) had all personnel from Bikini and Eneu islands aboard and was underway. The last ship out of the lagoon was USS Mount McKinley (AOC-7). These ships joined the other JTF 1 ships in operating areas east of Bikini. These operating areas were designated by the names of automobile manufacturers.

The first alrborne alreaft were three B-29s that bad made weather reconnaissance flights in the shot area and northeast and northwest of Bikini Atoli. At 0540 COTF 1 ordered the drop alreaft to take off from Kwajalein. This was a specially modified B-29 on which the bomb had been loaded about midnight (Figure 22). At 0555 the bomber was reported as being alrborne. The four F6F drones and sixteen F6F controllers from USS <u>Shangri-La</u> (CV-38) were alrborne shortly after 0700. In all, 79 aircraft were airborne on the morning of ABLE. By 0800 all aircraft and ships were on station. One F6F drone went out of control and crashed in the sea just as the B-29 began its live run at 0850. The bombing aircraft had made one practice run before the live run. Aircraft participation in Test ABLE is summarized in Table 7, and Table 8 summarizes the designated orbiting points for these aircraft.



Figure 22. "Dave's Dream," the B-29 from which the CROSSROADS, ABLE weapon was dropped.

All other air operations within 500 nmi (927 km) had been suspended 12 hours before the shot.

Observers included Congressmen, the President's Evaluation Commission, the Joint Chiefs of Staff (JCS) Evaluation Board, United Nations representatives, and media correspondents. The live run was made at 28,000 feet (8.5 km). The bomb was released at 0859 and detonated with a yield of 23 KT 15 seconds before 0900, 1,500 to 2,000 feet (457 to 610 meters) west of the planned surface zero (Figure 23).

An Army doctor trained as a radiological safety (radsafe) monitor made the following observation from a PBM aircraft 20 nmi (37 km) away (Reference A.2, p. 55):

At 20 miles it gave us no sound or flash or shock wave. . . . Then, suddenly we saw it -- a huge column of clouds, dense, white. boiling up through the strato-cumulus. looking much like any other thunderhead but climbing as no storm cloud ever could. The evil mushrooming head soon began to blossom out. It climbed rapidly to 30,000 or 40,000 feet, growing a tawny-pink from oxides of nitrogen, and seemed to be reaching out in an expanding umbrella overhead. . . . For minutes the cloud stood solid and impressive, like some gigantic monument over Bikini. Then finally the shearing of the winds at different altitudes began to tear it up into a weird zigzag pattern.

An aerial view of the cloud from the southeast is shown in Figure 24.

The radiological danger sector (radex) designated for aircraft at 0730 on the shot day predicted the downwind danger area to be between 325° clockwise

Туре	Quantity	Hission
Army		
8-17	3	Alr-sea rescue
B-17	4	Drone samplers
8-17	6	Drone controllers
8-29	ı	Compand
8-29	ì	Bomb drop
8-29	3	Radio broadcast
B-29	1	Press and newspen
8-29	2	Pressure-gauge drop
B-29	2	Radiological reconnaissance
WB-29	3	Weather reconnaissance
C-54	2	Photography
C-54	2	Observers
F-13 <sup>a</sup>	8	Photography
Navy		
FBF	¢	Drone samplers
f 6f	16	Drone controllers
FBF	6	Photography
PBM	2	Radiological reconalissance
PBM	3	Alr-sea rescue
PBM	4	Photo-radiometry
TBM	2	Alr-sea rescue
TBM	2	Photography
	4	Drone boat control

Table 7. Aircraft participation, Test ABLE, CROSSROADS.

<sup>6</sup>A B-29 modified for photography.
 <sup>6</sup>One F6Σ drame crashed in the ocean 10 minutes before the shot.
 Source: Reference C.9.205, Part VII, p. Fl.

Orbit Besignation	Bearing Surface ( <sup>0</sup> )	From Zero	Horizontal from Surfac (omi)	
Able	50		20	37
Char 11e	170		15	85
Dog	80		15	28
£asy	90		25	45
Ktag	125		15	28
Love	315		30	56
Nap	0		<b>2</b> 0	37
Peter	240		35	65
Sugar	135		20	37
lare	135		40	74
Unc le	40		30	56
Victor	315		20	31
¥111am	270		20	37
Yoke	45		20	37
Zebra	0		40	74
1.P.	225		30	56

Table 8. CROSSROADS, Test ABLE aircraft orbit points.

Note:

<sup>a</sup>Slant ranges of aircraft vary with aircraft-orbiting altitude. Drbiting altitudes were from 1,000 feet (305 meters) to 31,000 feet (9.5 km).

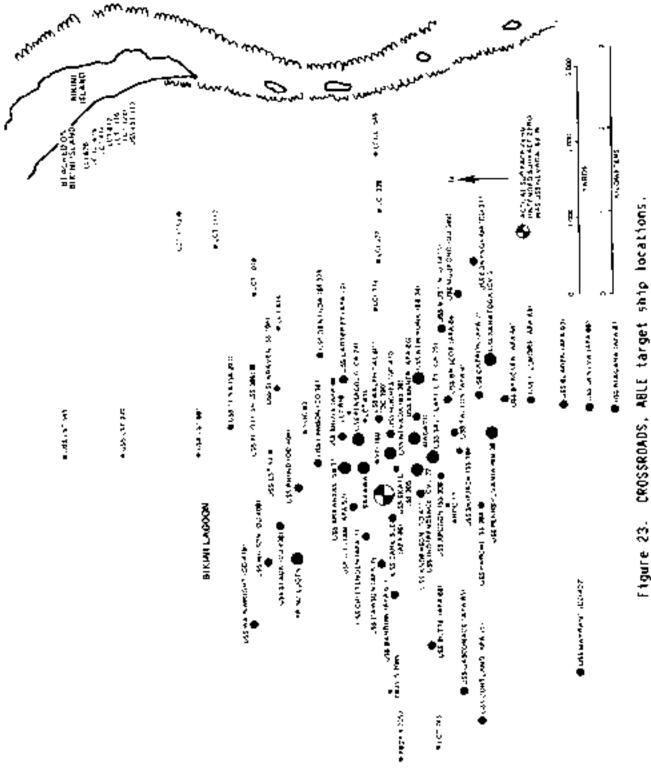






Figure 24. CROSSROADS, Test ABLE cloud.

to 125° from surface zero. At 1000 it was changed to 350° clockwise to 180°. The Red Arc was set 16 nmi (30 km) downwind from surface zero, and the Blue Arc 22 nmi (41 km) downwind from surface zero. Radsafe monitors were placed aboard all aircraft airborne in the vicinity of Bikini at shot time except in the single-seat F6Fs. The F6F pilots had Geiger counters whose click-ing signals were fed into their earphones to warn of increasing radioactivity (Reference C.9.206, Part VII, p. Cl0).

Two radiological reconnaissance PBMs began making passes over the target area at 0952, starting at an altitude of 2,000 feet (610 meters) and working down to 500 feet (152 meters). They continued until 1427 and then returned to Ebeye Island. Kwajalein. The two radiological reconnaissance B-29s began tracking and photographing the cloud at 1000 and were relieved during the day by two other B-29s. Four TBM aircraft were launched from <u>USS Saidor</u> (CVE-117) between 0910 and 0918. Two developed engine trouble and returned; the remaining two took stations upwind from the drone boats and transmitted boat locations to <u>Begor</u>, which was controlling the drone boats. They completed their mission and departed the area for <u>Saidor</u> at 1238.

Army and Navy aircraft involved with photography and cloud sampling accomplished their missions before 1000. B-17 sampler drones penetrated the cloud at altitudes of 13.000, 18.000, 24.000, and 30.000 feet (3.96, 5.49, 7.32, and 9.14 km) about 20 minutes after the detonation, obtained their samples, and were guided back to Enewetak Island. Three remaining Navy F6F drones sampled the radioactive cloud between 0906 and 0920 at altitudes of 10.000, 15.000 and 20,000 feet (3.05, 4.57 and 6.10 km). All three drones were guided back to Roi and were landed without incident. C-54 aircraft waiting at Enewetak and Roi transported the cloud samples in airbags and filters to Kwajalein. The samples were analyzed as soon as they were removed from the drones by Los Alamos Laboratory personnel. Filters were then sent to Los Alamos Laboratory for further analysis.

The drone control ship <u>Begor</u> started two of the drone boats and, using instructions from the TBMs, guided the boats into the target area. Both boats took several water samples based on radiation readings they transmitted back to <u>Begor</u>. Both drones departed the target area before 1200. <u>Begor</u> met the two drones in the anchorage area in the lee of Eneu and removed samples. Samples were transferred to <u>Moale</u>, which steamed to Kwajalein at 1255 (Reference C.9.206, Part VII. p. R19 through R22).

Reentry into Eikini Lagoon commenced at N+2 when six manned PGHs and twenty LCPLs entered to conduct radiological reconnaissance. They carefully approached the atea around the target vessels and measured radiation. Information from these boats was used to define the Red and Blue lines. Boarding teams and salvage units for the target vessels entered the lagoon at H+4 and proceeded with operations as the radiological situation permitted, remaining outside the Blue Line except for designated ships. At 1430 on 1 July the lagoon was declared safe and task force ships reentered and anchored in the southern part of the lagoon. By 2030, 18 target ships had been boarded and reported radiologically safe. By the evening of 2 July, 47 ships had been radiologically cleared. The Red Line was eliminated early on the morning of 2 July, indicating that the maximum intensity of the water fell below 1 R/24 hours during the night. The Blue Line was eliminated at 1008 on 2 July.

Two F6Fs took off at 1615 on 1 July to conduct an oceanographic survey of the Bikini Lagoon by taking photographs with strip cameras (Reference C.9.206. Part VII. pp. E141 through E175). At 2039 and 2047 on 1 July, two B 29s took off and sampled the remnants of the radioactive cloud. Both obtained good samples. However, both aircraft were too contaminated to permit maintenance crews to perform postflight inspections. Several WB-29 weather flights with monitors on board plus a low-altitude photo mission over the target area were flown on 2 July (Reference C.9.206, Part VII. p. Ci4).

The Marshallese at Rongerik disembarked from  $1.5\underline{T}$ -989 the afternoon of 1 July (Reference C.9.206, Part VII, pp. C10 through C15). <u>Burleson</u> picked up caged animals from five target ships shortly after 1600 on 1 July (Reference C.9.206, p. 189). At 2142 on 1 July all ships in the lagoon were ordered not to use their evaporators (saltwater-to-freshwater converters) because of possible radioactive contamination (Reference C.9.206, Part VI, p. B14). At 1332 on 2 July CJTF I lifted this restriction (Reference C.9.206, p. VI-8-16). Also on 2 July the submarine USS <u>Skate</u> (SS-305) was beached to prevent sinking. The islands of Eneu and Bikini were inspected and declared safe the same day. By 4 July all target ships had been "initially boarded" by one of the ten initial-boarding teams (Reference C.9.206, pp. V-C-6 and VII 10 through VII-15).

Damage to ships and aircraft of the target array was as follows (References C.9.2, C.9.3, and C.9.157):

- 5 ships sunk
- 6 ships seriously damaged
- 8 ships seriously impaired efficiency.

- 9 ships moderately damaged
- 43 ships negligible damage
- 22 landing craft beached at Bikini Island, no damage
- l4 aircraft destroyed
- 30 aircraft seriously damaged
- 10 aircraft lightly damaged
- 19 aircraft no damage.

In general all target vessels within 500 yards (457 meters) of actual surface zero were sunk or seriously damaged. Those beyond 1,500 yards (1.37 km) received minor damage (Reference C.9,206, Part V, p. C6). Those ships beyond 750 yards (686 meters) had little induced activity or contamination: they were reboarded on 1 July and were used for crew quarters beginning on 2 and 3 July. Figure 25 shows a group of VIPs and CJTF 1 inspecting <u>New York</u> after ABLE. By 5 July all target vessels (except those sunk) had been rehabilitated to the extent necessary for the upcoming BAKER event.

More than 50 percent of the test animals within 1.000 yards (914 meters) died, between 15 and 30 percent died between 1.000 and 2.000 yards (0.91 and 1.03 km), and between 5 and 15 percent died outside 2.000 yards (1.83 km). Airblast was the principal cause of injury and death. However, radiation exposure was the principal cause of death for those animals who died after the first few hours.

During Test ABLE, 200 cameras, 300 S-gallon (18.93-liter) cans. 400 photographic radiation badges, 5,000 suifur capsules, 850 ball-crusher gauges, and over 5,000 other gauges of various types were used to measure and record the detonation effects (blast, heat, and radiation). The timing signal relied on to start a number of instruments was sent out about 10 seconds late because of errors by the timing signal operator. The following instruments obtained no data as a result of this 10-second delay: free-plston gauges, shock wave velocity cameras, O'Brten and Bowden cameras on Bikini, Fastex cameras on Bikini and Eneu, and the drum spectrograph.

## PREPARATION FOR BAKER

As soon as the extent of damage from ABLE had been determined. CJTF 1 tentatively set 25 July for BAKER. The news media ship <u>USS Appalachian</u> (AGC-1) returned to Peari Harbor to allow some media people to depart and others to join the group. Some observers were taken on a cruise to Ponape, Truk, Majuro, and Guam islands while the task force prepared for BAXER (Reference C.9.206, Part V. p. C?).

Several target ships had sustained boiler and/or stack damage. Wreckage was cleared and repairs made so that every target ship (except chose sunk) was able to steam under its own power on at least one boiler. USS independence (CVL-22) needed considerable work to ensure watertight integrity. The submarine <u>Skate</u> needed superstructure repairs. including a temporary bridge (Figure 26). One by one the target ships were soved to their positions in the new target

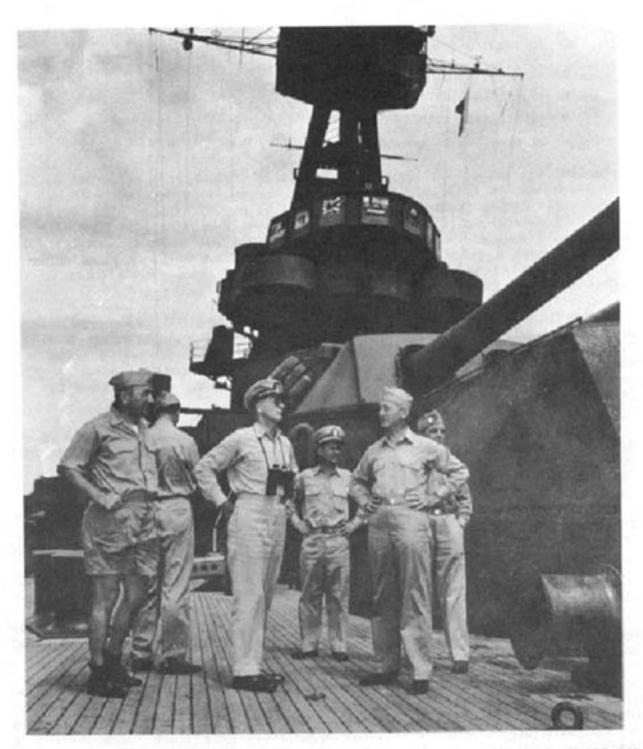


Figure 25. VIPs and Commander Joint Task Force 1 inspect USS New York (B8-34) following Test ABLE.



Figure 26. Damaged USS Skate (SS-305) on 3 July following Test ABLE.

array for BAKER. Test ABLE blast damage inspections were completed (Figure 27). and new instrumentation and new experiments were set up on these target ships in preparation for Test BAKER (Reference C.9.206, Part VII. p. A73).

Some turnover of task force personnel occurred following ABLE. A continuous training program was in effect after ABLE to train new personnel in preparation for BAKER. A large quantity of radiac instruments was received during this period. alleviating a minor shortage experienced during ABLE. The underwater BAKER shot was expected to create a much larger radsafe problem and require more radiac meters than did ABLE (Reference C.9.206, Part VII. p. Cl7).

The Army Air Forces conducted a major rehearsal on 14 July. All Army air units participated. Locations, communications, and coordination were tested.



Figure 27. Inspection of Army vehicle on deck of <u>USS Nevada</u> (BB-36) following Test ABLE, CROSSROADS.

checked, and rechecked. Then on 19 July, JTF 1 conducted a full-scale dress rebearsal, dubbed "William Day." All units of the task force participated fully except the air task units. Heavy cloud cover and rain limited aircraft participation in the rebearsal (Reference C.9.206, Part VII, p. E180).

On D-1 (24 July) CJTF 1 confirmed BAKER Day as 25 July and designated shot time [or 0835. Weather Forecasts indicated that there would be favorable weather on that day. Evacuation of task force ships and personnel began immediately. Personnel and ships not needed immediately after the shot were evacuated to Rongelap Atoll instead of Kwajalein because it was closer to Bikini. <u>USS</u> <u>Saint Croix</u> (APA-231) evacuated 607 U.S. personnel and natives from Enewetak on 21 July.

The day before HAKER, two C-54s were again sent to Enewetak and Roi islands to transport the cloud samples to Kwajalein on 25 July. Five C-54s were again positioned at Enewetak in case evacuation of essential personnel was necessary. Except for minor changes, the alreaft missions were similar to the ABLE shot missions. Table 9 shows the alreaft that participated in BAKER, and Table 10 summarizes their orbit areas.

By 1735 on 24 July all but 13 support ships were clear of the lagoon. These cleared the lagoon by 0700 the following morning. Task force personnel on the islands at Bikini were evacuated by 1555 on 24 July. Three sailors on <u>USS</u> <u>Casconade (APA-85)</u>. a target ship, were somehow overlooked. They filled the yardarms with bunting (the signal that they needed evacuation) and were picked up by <u>USS Conserver</u> (ARS 39) at 0530 on 25 July (Reference C.9.206. Part VII. pp. H5-H7).

The bomb was suspended 90 feet (27.4 meters) beneath the surface of the lagoon from medium landing ship LSM-60. The LSM had been extensively modified to provide rigging facilities. a laboratory, and special radio receivers and transmitters. The bomb was encased in a strong, waterright, steel caisson and had a coaxial cable running from it to the LSM. The TG 1.1 laboratory personnel associated with the bomb arming were evacuated from LSM-60 at 0545 on 25 July (Reference C.9.206, p. 5.12).

There were 68 target vessels in the array for Test BAKER. Twenty four small craft were beached on Bikini Island. Their positions are shown in Figure 28. The submarine USS Searaven (SS 196), which had been submerged on 24 July, partially surfaced later in the day. It was finally resubmerged by 2300 on 24 July. Of the eight target submarines, six were submerged and two were on the surface for the test (Reference C.9.206, Part VII, p. F10).

Weather was not quite as important for BAKER as for ABLE because the underwater detonation was expected to limit the cloud height and thus localize the radioactivity. Good visibility, however, was important for photography (Reference C.9.206, Part IV, p. C7).

## BAKER TEST

BAXER was detonated on schedule at 0835 on 25 July 1946. The detonation command was sent by radio using coded signals. The weapon yield was 23 KT.

Туре	Quantity	Rission
Army		
8-17	3	Alr-sea rescue
8-17	4	Orone samplers
B-17	6	Drome controllers
B-29	1	Radio broadcast
B-29	1	Press and newsmen
8-29	S	Command
8-29	Ż	Pressure-gauge drop
8-29	2	Radiological reconnaissance
W8-29	3	Weather reconnaissance
C-54	1	Observers
C-54	2	Photography
F-13 <sup>D</sup>	8	Photography
Havy		
F6F	3	Orone samplers
F6F	12	Drone controllers
F&F	6	Photography
PBM	3	Radiological reconnaissance
PBH	5	Atr-sea rescue
PBM	5	Photo-radiometry
TOR	Ş	Photography
TBM	+	Drone boat control
Notes:		
<sup>a</sup> Does no 1200, 2	)t include a 25 July:	froraft taking off after
DA 8-29	modified fo	r photography.
Source:		C.9.206, VII 5, Encl. 9.

Table 9. Aircraft participation, CROSSROADS, Test BAKER<sup>a</sup>.

Orbit Designation	Bearing Surface (°)	Horizontal F from Surface [nemi]	
Able	45	 20	37
Charlie	180	10	19
Dog	330	9	17
Easy	90	20	37
King	225	10	19
Love	315	30	56
Sugar	135	20	37
Tare	135	40	34
Victor	315	50	37
William	270	20	37
Yoke	45	7	13

# Table 10. CROSSROADS, Test BAKER aircraft orbit points.

## Note:

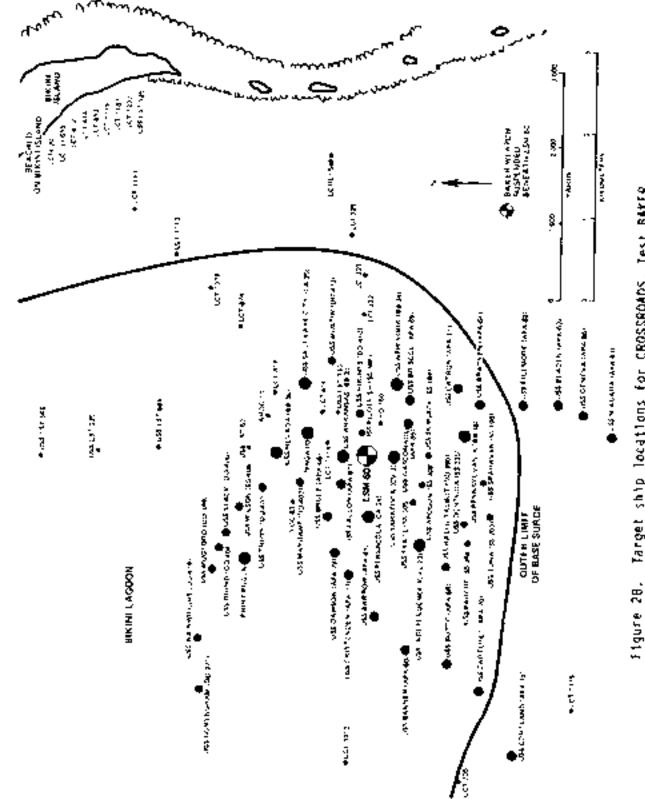
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<sup>a</sup>Slant ranges of aircraft vary with orbit altitude. Orbit altitudes were from 500 feet (152 meters) to 30,000 feet (9.1 km).

\_ \_\_\_

Source: Reference C.9.206, p. VII-(E)-194.





Observers included United Nations representatives. Congressment the President's Evaluation Commission, the JCS Evaluation Board, and media representatives (Reference C.9.206, Part V. p. C8).

The Army radiate monitor previously quoted was again aboard a Navy PBM about 15 nmi (28 km) away and described the visual effects as follows (Reference  $\lambda$ .Z, p. 93):

The flash seemed to spring from all parts of the target fleet at once. A gigantic flash -- then it was gone. And where it had been now stood a white chimney of water reaching up and up. Then a huge hemispheric mushroom of vapor appeared like a parachute suddenly opening. . . By this time the great geyser had climbed to several thousand feet. It stood there as if solidifying for many seconds, its head enshrouded in a tumult of steam. Then slowly the pillar began to fall and break up. At its base a tidal wave of spray and steam rose to smother the fleet and move on towards the islands. All this took only a few seconds, but the phenomenon was so astounding as to seem to last much longer.

Anothet aircraft observer reported seeing a major ship "on [its] nose" before it sank and saw a water wave pass over one of the small islands between Bikini and Eneu islands about 2 minutes after the detonation (Reference C.9.205, Part VI, p. D9). Figure 29 shows the BAKER detonation wave as it ifted the stern of <u>Saratoga</u> some 43 feet (13.1 meters). The dark area to the left of <u>Saratoga</u> is believed to be a cavity in the column formed by the hull of <u>USS Arkansas</u> (BB-33). When the air over the fleet cleared. <u>Arkansas</u>, LSM-60, and Four LCTs were not in sight. <u>Saratoga</u> was listing to starboard and her stern was low. Figure 30 shows the BAKER cloud as viewed from the manned support ships in their operating areas.

The underwater burst inflicted heavy damage on the target fleet. Eight ships were suck or capsized (See Table 11). Eight ships were immobilized or seriously damaged. Generally, ships beyond 1.500 yards (1.37 km) were undamaged. Those between 1.100 and 1.500 yards (1.01 and 1.37 km) susustained only slight damage. Those between 900 and 1.100 yards (0.82 and 1.01 km) suffered moderate damage. Those inside 900 yards (823 meters) were seriously damaged or were suck (Reference C.9.208, p. 23.3).

At 0912, the drone control ship, <u>Begor</u>, began moving two drone boats from the lee of Eneu towards the target array using directions from the orbiting drone control TBMs as in Test ABLE. Each boat took ten 5-gallon (18.93-liter) samples of lagoon water and by 1030 was en route back to its anchorage. The drone boats were so radiologically contaminated that boarding parties from <u>Begor</u> could not go aboard. The drone boats were taken to <u>USS Albemarie</u> (AV-5) where the water samples were finally removed about 1430. Two additional drone boats were guided into the target area the same atternoon using the same combination of TBMs and <u>Begor</u>. Each took 10 samples of water, which were transferred to Albemale about 1800. <u>Albemarie</u> then headed for Kwajalein with the samples. Four more runs were made on 26 July and two more on 27 July using the same control procedures. The radiation intensities had lessened somewhat, allowing boatding parties from Begor to remove these samples and transfer them to <u>USS</u> <u>Haven</u> (AN-12) (Reference C.9.206. Part VII. p. R28-34).

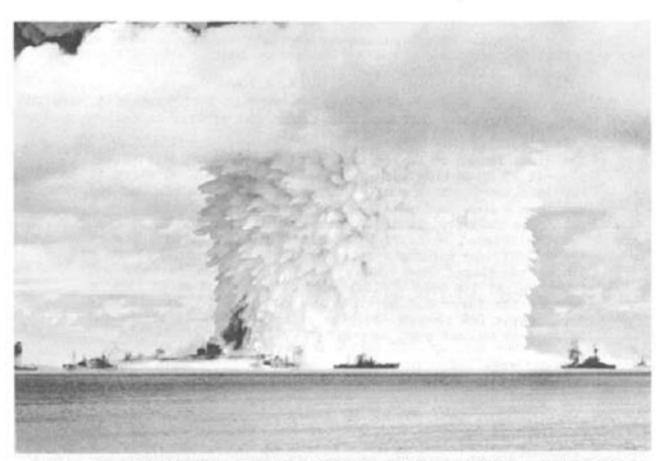


Figure 29. CROSSRDADS, Test BAKER column at about 10 seconds, photographed by remote-control camera on Eneu Island.

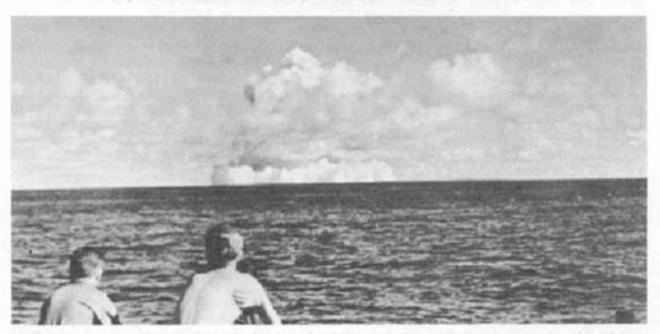


Figure 30. CROSSROADS, BAKER cloud as viewed from the manned support ships in their operating areas.

Table 11. Target ships sunk at CROSSROADS<sup>a</sup>.

ABLE	BAKER			
USS Anderson (BD-411)	<u>USS Arkansas</u> (BB-33)	ARDC-13		
<u>USS Carlisle</u> (APA-69)	LSM-60 <sup>0</sup>	USS Apogon (SS-308)		
<u>USS 61111am</u> (APA-57)	<u>USS Pilotfișh</u> (SS-386)	<u>Nagato</u>		
USS Lamson (DD-367)	¥0-160	<u>USS Saratoga</u> (CV-3)		
<u>Sakawa</u>				

Notes:

<sup>a</sup><u>USS Dentuda</u> (SS-335), submerged for test, flooded and sank; later it was raised and taken to Pearl Harbor and is not included in the ship sunk calegory. Six LCTs were sunk at Bikini after Test BAXER.

<sup>b</sup>Surface zero ship.

Sources: Reference A.J. pp. 130-132; Reference C.9.2, pp. 32-33.

Three air-sea rescue B-17s parcolled the area between Enewetak and Bikini to protect the six drone-control B-17 crews. Your drone-samplet B-17s took part in the test. Two were flown over surface zero at detonation time, one at 6.000 feet (1.83 km) and one at 16.000 feet (4.88 km). The one at 6.000 feet (1.83 km) had its bomb bay doors warped, its inspection plates blown open, the tail gunners hatch blown inside the airctaft, the canvas cover over the tail wheel split, and the standard aircraft cushions inside split open. The other B-17 drone jumped 300 feet (91 meters) in altitude but sustained no damage. The third B-17 drone sampled in the cloud at 7,000 feet (2.13 km) 5 minutes after the burst, and the fourth B-17 drone sampled above the cloud at 11,000 feet (3.35 km) 7-1/Z minutes after the burst. Three Navy P6F drones and their twelve F6F controllers took off from Shangri-La and sampled at altitudes of 14.000, 9.000, and 5.000 feet (4.27, 2.74, and 1.52 km). Only the drone at 5.000 feet (1.52 km) passed through the cloud. Sampling was completed by 0850 and all aircraft returned safely to base (Enewetak for the B-17s and Rol for the F6Fs). The altbags and filters were removed by los Alamos Laboratory personnel and transported in the waiting C-54s to Kwajalein for analysis.

Eight B-295 and three WB-295 participated in shot BAKBR. The radio broad-Cast, press. and command B-295 orbited the area accomplishing their missions at a safe distance. The two pressure-gauge drop B-295 dropped their gauges from 24.000 and 25.000 feet (7.32 and 7.62 km) just before the detonation. The two radiological reconnaissance B-295 tracked and photographed the remnants of the cloud until almost 1400 when they were relieved by two other B-295. The three WB-295 were airborne by 0201 the morning of the detonation to report on cloud cover and other weather phenomena north and east of Bikini until 0500, when they returned to Bikini to provide current weather reports at that location. The three C-54 and eight F-13 Army aircraft were involved with transporting observers and photography (Reference C.9.206, Part VII, p. E195 through E207). All aircraft except the F6F had radsafe monitors aboard. As at Test ABLE. the P6P pilots used earphones connected to Geiger counters to monitor radioactivity.

Early reports from radiological reconnaissance PBMs and drone boats indicated that the lagoon and surrounding atmosphere were intensely radioactive. A drone boat recorded about 730 8/24 hours near the center of the target array. The three PRMs made several passes over the lagoon on 25 July, starting at 4.000 feet (1.22 km), then at 3.000, 2.000, 1.000 and 500 feet (914, 610, 305, and 152 meters); the first pass was made at 0915 and the last at 1615. The preshot radex sector bearings of 360° clockwise to 220° were modified slightly at 0940 to 360° to 270°. The Red Arc was set at 9 nmi (17 km) from surface zero and the Blue Arc at 11 nmi (20 km) from surface zero (Reference C.9.206, Part VII, p. C-19).

Reentry into the Lagoon commenced at 0916 when the PGM and LCPL radiological patrol boats with monitors aboard entered. They were closely followed by TU 1.2.8 and <u>Kenneth Whiting</u>. <u>Fall River</u> took up its position at the Lagoon entrance at 0947 to control entry and exit. The Salvage Unit (TU 1.2.7) entered the Lagoon at 1015 and began checking and boarding target vessels. A total of 49 support ships with 14.920 personnel entered the Jagoon by the end of 25 July.

For BAKER, ten initial boarding teams were established, a total of 86 menincluding one monitor for each team. These teams were the first groups to return to the target vessels, although five of the firefighting officers may not have actually reboarded unless there was a fire to fight (Reference B.O.I. pp. X-X-1 through X-X-17). In addition, representatives of the groups responsible for the scientific experiments and tests of military equipment returned to retrieve data and materials when given permission by the bonitors. Film and other data were recovered from Bikini and Eneu islands during the afternoon. Tweive target ships were temporarily boarded, ten of which were declared radiologically safe (no radiation measured above 0.1 R/24 hours) before nightfall on 25 July (Reference C.9.205, p. VII-C-53). The remaining target ships were too radioactive to board and the water near the deconation site remained radioactive as well (Reference C.9.206, p. VII-C 54).

The radioactive cloud had apparently moved north of the burst. Radiological reconnaissance F-13s discovered weak tadioactivity while flying 43 nai (80 km) north of the lagoon at (318 and a highly radioactive cloud at 80 nmi (148 km) almost directly north of Eneu Channel at 1610 (Reference C.9.206, Part VI, p. D13). An F-13 due west of Bikini at 50 nmi (93 km) made no contact with radio-activity by 1415. Apparently based on this information, the alert at Enewetak Atoll west of Bikini was dropped at 1418 and clearance was given to return evacuees there (Reference C.9.206, Part VI, p. D13).

At about 1608 <u>Saratoga</u> sank (Figure 31). Until that time it had been the oldest U.S. aircraft carrier afloat. <u>Saratoga</u> was laid down as a battle cruiser in 1920, but was completed as an aircraft carrier. Radiological conditions prevented any attempt to save the ship.

The radioactivity persisted through 26 July. Films from cameras on Nomen Island were recovered using helicopters. An oil slick with radioactive debris



Figure 31. USS Saratoga (CV-3) sinks following CROSSROADS, Test BAKER.

was observed north of Nam Island (outside the lagoon). Task force ships in the lagoon stayed in the southeast sector near the entrance in order to keep clear of the radioactive water. Their evaporators were allowed to be used on 26 July. The target ship <u>USS Hughes</u> (DD-410) was towed to Eneu and beached by <u>USS Reclaimer</u> (ARS-42) to prevent sinking. Figure 32 shows a welder aboard <u>Hughes</u> during preparations for towing. Note the respiratory protection device being worn and the nearby monitor. The same situation persisted on 27 July: however, some instrumentation was recovered from the target ships. <u>USS Preserver</u> (ARS-9) attempted to get a line aboard the damaged and heavily contaminated <u>USS Fallon</u> (AFA-81) so that it could also be beached beside <u>Hughes</u>. This could not be accomplished until the following day, however.

Because of the persistent radiation in the lagoon, several radiological reconnaissance flights took place over the next few days. Eight missions were flown on 26 July and two on 27 July. Five photography flights were made on 26 July and four on 27 July. Six drone boat control TBMs flew on 26 July and two on 27 July. Photo and radiological reconnaissance flights continued through 30 July, while drone boat control flights were not needed after 28 July (Reference C.9.206, Part VII, S, Encl 13-14).

On 28 July, radioactive water in the lagoon spread southeast to some of the task force ship anchorage areas, forcing some ships to relocate to uncontaminated areas. However, the Red Line (1 R/24 hours) was eliminated at 1455 on 28 July. On 28 July at 2352, <u>Summer</u> reported readings of 0.156 R/24 hours on outboard bunks and 0.204 R/24 hours at the evaporators. On 29 July it was sent out of the lagoon and into the open sea in an attempt to decontaminate the hull. PGM-24 and PGM-29 had become contaminated earlier, reading 1.56 R/24 hours amidships. Their crews were evacuated to USS Appling (APA-58) and Haven.



Figure 32. Welder aboard USS Hughes (DD-410) during preparations for towing it after CROSSROADS.

Some test animals were recovered from target ships (<u>USS Bracken</u> [APA-64], <u>USS</u> <u>Catron</u> [APA-71], and <u>USS Fillmore</u> [APA-73]) on this date. Also, attempts to surface the submarines that had been submerged were begun. The next day more animals were removed from <u>Catron</u>, <u>USS Briscoe</u> (APA-65), and <u>Gasconade</u>.

By 29 July it was apparent that the target fleet was much more heavily contaminated than had been expected. The inspection and documentation of BAKER's effects -- a major reason for CROSSROADS -- could not proceed if target vessels were too contaminated for reboarding and thorough examination. The effort to develop and apply decontamination methods to the target fleet are described in Chapter 5.

During the fourth night after BAKER, the captured Japanese battleship <u>Nagato</u> sank. The next day, resurfacing of submarines continued, as did the recovery of animals from target ships. The radiological situation improved slightly, allowing a few more target ships to be boarded. Pieces of highly radioactive steel, believed to be from LSM-60, were found on the quarterdeck of <u>USS Pensacola</u> (CA-24) (Reference C.9.206, P VI-D-45). Figure 33 shows a monitor amidship on <u>Pensacola</u> and illustrates the general level of damage on its weather decks.

On 30 July most target ships remained too radioactive for boarding; however, radioactivity of the lagoon waters continued to decrease. The Blue Line (0.1 R/24 hours) was eliminated at 1041 on 30 July (Reference C.9.206, p. VII-C-23), although a report from <u>Burleson</u> stated that between berths 113 and 115 a reading of 0.1 R/24 hours was obtained 3 feet (0.9 meter) above the water's surface on 30 July (Reference C.10.17).

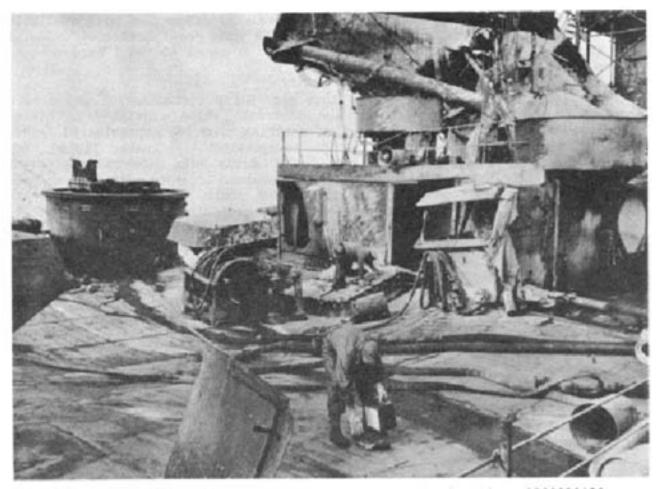


Figure 33. Monitor amidship on <u>USS Pensacola</u> (CA-24) after CROSSROADS, BAKER.

On 30 July the last of the animals were removed from <u>Gasconade</u> and <u>Con-</u> <u>server</u>. Although most animals were located below deck, the great majority of them died by 1 November 1946. In nearly all cases, the cause of death was gamma radiation resulting from Test BAKER's radioactive rainout and base surge (Reference C.9.208, p. 8). Also, many of the fish in the northeast corner of the lagoon were killed by the explosion.

On 31 July, Bikini Island was declared safe and personnel were permitted to go ashore. The beaches were declared off limits, however, because of radioactive debris that may have washed up. Many target vessels still remained too contaminated to board and the persistent radioactivity on these ships made the prospect of reboarding "very discouraging" (Reference C.9.206, Part VI, p. D48). Three submarines remained submerged in the lagoon. The lagoon water, except near the bottom, had reached safe levels by the evening of 31 July. Complete recovery of instrumentation and records was not completed until 7 August (Reference C.9.206, Part VI, p. D5-47).

On 8 August CJTF 1 requested authority from the Chief of Naval Operations to decommission, or place out of service, 38 target vessels at Bikini. He

argued that the ships were in such radiological condition that with available personnel and equipment they could not all be made safe (Reference U.10.11) for the work heeded either to prepare them for movement to Pearl Harbor or to assess their damage fully (Reference C.10.17).

By 11 August it was recognized that post BAKER contamination was also a continuing and increasing problem for nontarget ships remaining in Bikini Lagoon (Reference C.10.14). Redioactive material from the contaminated lagoon was accumulating in the support ships' evaporators, saltwater piping, and matine growth on the outside of their hulls. Plans were made to move target vessels and support ships to Kwajalein, a convenient location with good anchormages, where the problems resulting from BAKER could be faced free from the environmental contamination present at Bikini. Beginning 19 August, 53 target ships were towed to Kwajalein and by 5 September the last of the target fleet had left Bikini.

# CHAPTER 5

# POST-BAKER OPERATIONS: BIKINE, KWAJALEIN, AND THE UNITED STATES

In early August it became apparent that while the radiation levels in the water and on the land areas were below tolerance levels, the accumulation of radioactivity in the remaining ships' evaporators, saltwater piping, and marine growth on their hulls presented an increasing problem. Consequently, the base of operation of the task force had to be moved from Bikini. Kwajalein Atoll was selected for the new base (Reference C.0.22, p. 1). On 19 August 1946, movement of all remaining ships to Kwajalein was initiated, and by 26 September 1946 Bikini Atoll was completely evacuated. Subsequently, a large number of them were sunk, others were returned to naval shipyards in the United States for inspection and additional decontamination.

The experience, problems, and solutions associated with ship decontamination at Bikini and in naval shipyards and a discussion of radiological and other problems associated with off-loading amounition from target ships and securing them at Kwajalein are addressed in this chapter.

### REMAANING EIGHTLY CONTAMENATIO TARGET SHIPS AT BIKINI

Five target vessels, attack transports USS Bladen (APA-63), USS Cortiand (APA-75), USS Fillmore (APA-83), USS Geneva (APA-86), and USS Niagara (APA-87), were on the outer fringes of the target array and were not heavily contaminated by the rainout or the base surge (see Figure 28, Chapter 4). The crews of Bladen, Fillmore, Geneva, and Niagara returned to their ships on 29 July, and Cortland's crew returned on 30 July (Reference A.3, Bladen, Cortland, Fillmore, Geneva, and Niagara).

The ships needed some decontamination work (Reference C.9.185, pp. 4 and 10). Although the radioactivity on these ships' weather surfaces was not sufficient to prevent reboarding and cleanup work, they were found to have radioactivity on the outside of their hulls at the waterline, apparently because marine growth there was taking up radioactive isotopes from the lagoon water. Radioactivity was 0.4 R/24 hours on the inner surface of <u>Niagara</u>'s hull, decreasing to 0.1 R/24 hours 5 feet (1.5 metors) toward the center of the ship (Reference C.2.1). After the waterline areas of the five ships were scraped, they steamed in the open ocean for 24 hour, in an effort to reduce contamination. <u>Niagara</u> steamed alone on 1 and 2 August and the other four steamed as a group on 4 and 5 August (Reference A.3. <u>Bladen</u>, <u>Cortland</u>, <u>Filmore</u> and <u>Geneya</u>). In addition, <u>Geneva</u>'s entire bottom was scraped by passing wires under the hull from one side to the other and pulling them toward the stern (Reference C.9.185, p. 18). Upon reaching Pearl Harbor, the small boats of both <u>Cortland</u> and <u>Pillmore</u> were found to be radioactive (Reference C.2.4 and C.2.5).

# DECONTAMINATION OF REAVELY CONTAMINATED TARGET VESSELS AT BIKING

Decreasing lagoon radioactivity by 27 and 28 July allowed the Director of Ship Material (DSM) aboard <u>USS Reclaimer</u> (ARS-42) to survey other target ships from a distance of 50 to 100 feet (15 to 30 meters). Of the 92 target vessels, only 10 ships in the target array and 20 landing craft beached on Bikini islands had readings less than 0.1 R/24 hours by 2000 on 3 August (Reference C.11.19). Since "the nature and extent of contamination of the targets was completely unexpected, no plans had been prepared for organized decontamination measures" (Reference C.9.185, p. 4). As a result, the Technical Director and the DSM could not complete their programs in a timely way unless a means could be found to decontaminate the target vessels.

#### Washdown of Target Ships

After conferring with members of the Radiological Safety Section. the DSM took the lead in trying to remove contamination from the target vessels with materials and equipment immediately available to the task force at Bikini. First, task force firefighting equipment was used. Use of firefighting equipment is shown in Figure 34 as <u>USS Achomawi</u> (ATF-148) uses its forward monitor to wash down <u>USS New York</u> (BB-34).

Firefighting vessels of Task Unit (TU) 1.2.7, the Salvage Unit, twice attempted to wash down the heavily contaminated <u>USS Hughes</u> (DD-410) with saltwater on 27 July. The first affort produced a 50 percent reduction in radiation levels, but the second did not lower the radiation level. Next. foamite, a foam-like preparation used for smothering fires, was tried. Foamite was plentiful and was hoped to have a detergent action on the contamination adhering to <u>Hughes</u>. Fireboats sprayed <u>Hughes</u> with foamite and then with saltwater. Figure 35 shows the beached <u>Hughes</u> whitened by the foamite as two Salvage Unit ships stand by.

The reduction in radioactivity led to a decision to use foamite and saltwater until a better method was devised. The foamite and saltwater method, however, could be used only after waiting for the lagoon water to become virtually free of contamination. Radioactivity from the lagoon would itself contaminate both target and firefighting ships. Moreover, because the foamite and saltwater method was not totally effective. a search for better methods continued (Reference C.9.185, pp. 5 and 6).

#### Early Experiments in Decontamination

At a meeting on 27 July, attended by the DSM and members of the Radiologital Safety Section, the radiological safety (radsafe) group was directed to study the decontamination problem. It selected pleces of contaminated equipment and blasted them with ground corncobs, coconut shells, barley, rice, ground coffee, rice hulls, and sand. Sandblasting worked best, but it was not suitable for general decontamination of the more than 60 contaminated vessels of the target fleet (Reference C.9.185, pp. 6 and 7).

Observation had revealed that most radioactivity stemmed from radioactive material collecting on painted or rusty surfaces, or on exposed organic materials, such as canvas, life rafts, manila lines, swabs, brooms, wood decks.



Figure 34. USS Achomawi (ATF-148) spraying USS New York (88-34) with saltwater after BAKER, CROSSROADS.



Figure 35. USS Hughes (DD-410) beached off Eneu Island, covered with foamite following BAKER, CROSSROADS (two Salvage Unit ships are to the right).

and tar and caulk used to plug seams. On 28 and 29 July, the DSM conducted a small-scale laboratory study on painted wood, steel, and canvas using scap nowder, is and naphtha; acetic, hydrochloric, and sulfuric acids; and flour, is antistarch, activated charcoal, and sandblasting. Removal of the outer layer of paint or removal of the rust proved to be an effective, if laborious, approach. Apparently only acetic acid worked on canvas (Reference C.9.185; Reference A.2, p. 109).

From 28 through 30 July, large-scale experiments were conducted on the target submarine USS Tuna (SS-203). The submarine was sprayed first with diesel oil, which proved ineffective as a detergent. However, a 66 percent reduction in radiation level was observed after much of the submarine's paint was removed by applications of a lye and boiler compound solution followed by a saltwater rinse (Reference C.9.185, p. 8). This encouraged the DSM to issue general instructions on 31 July for preliminary decontamination of target vessels. followed on 4 August with more detailed instructions. The procedure called for the fireboats to spray each contaminated target ship with saltwater and with the lye and boiler compound solution if needed. Once the radiation level was reduced to the point where personnel could remain for at least 2 hours, the ship's crew was to work in relays thoroughly scrubbing the ship. Figures 36 and 37 show ships' forces scrubbing an unidentified submarine and a ship. Clearly, the DSM expected that this procedure would lead to radiation levels low enough to allow continuous habitation of the ships so that they could return to home ports under their own power (Reference C.9.187, pp. 4, 7, and 10).



Figure 36. Work crews scrubbing down an unidentified target submarine, CROSSROADS.

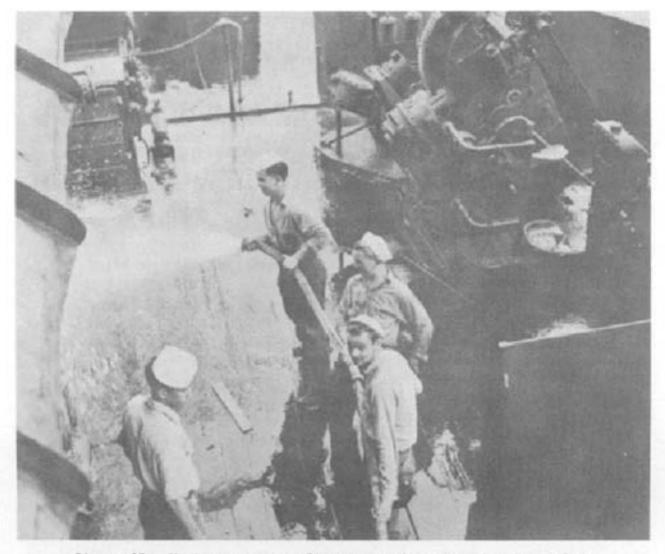


Figure 37. Work crews use a firehose on the superstructure of an unidentified target ship, CROSSROADS.

Radiological Safety Considerations During Decontamination

Radsafe precautions, also promulgated as part of the decontamination procedures. included these instructions (Reference C.9.187, pp. 5 through 7):

- Monitors were to be present at all times while the work was in progress
- Personnel were not to overstay the time limit set by monitors
- All personnel were to be fully clothed, and to shower and change clothes after finishing decontamination work
- All clothing worn during decontamination work was to be laundered before rewearing
- Personnel were to remain upwind of spraying and washing operations

- K-rations and water in canteens for decontamination crews were to be brought aboard daily
- "Radiological dangers" were to be clearly marked and, if necessary, roped off.

The Chief of the Radsafe Section (who was also entitled Radsafe Advisor) in a memorandum to Commander Joint Task Force 1 (CJTF 1), however, warned on 3 August of various problems and hozards. He wrote that high residual radiation on and in most target ships presented "an extremely difficult and dangerous problem." about which basic decisions had to be made soon. Early radiation surveys and decontamination experiments had led him to the following conclusions (Reference C.0.20):

- The contaminated decks and superstructures of the target fleet totaled about 100 acres (40.5 ha)
- In most cases, dangerous contamination remained even after strenuous decontamination efforts
- Some ships were badly contaminated below decks, and the task force had no way to deal with it
- No practical method had been found to decontaminate wooden or rusty surfaces short of removing the contaminated outer layer of the material
- Most decontamination methods possible, other than water washing, were themselves potentially hazardous
- The need for thoroughly washing the bodies and the clothes of boarding party members was putting a severe strain on the freshwater supply.

Moreover, the memorandum observed that even after repeated washings decks and superstructures of important target ships remained contaminated to levels between 1 and 10 8/24 hours. Average and maximum readings for CROSSROADS target vessels are given in Appendix F. These levels were high enough to severely restrict the amount of time men could work on ships without risking overexposure. Furthermore, months would pass before natural decay would lower intensities to the point where crews could occupy and operate the ships. Overexposures had been a problem in the work so far and probably would continue to be. The Chief of the Radsafe Section was concerned that even if exposures could be kept at or below 0.1 R/24 hours, over the long term they might cause sterility, anemia, and genetic damage, the latter of particular concern because the majority of the men were young. Finally, the departure on 15 August of 350 monitors and other radsafe personnel would leave about 24 military and a few civilian personnel to protect the many working on the over 70 target ships.

Consequently, to reduce the potential for radiological risk, the Chief of the Radsafe Section recommended that (Reference C.0.20):

 The time until 14 August be spent working on relatively uncontaminated vessels and those of greatest value to the task force

- Other target vessels, such as <u>USS\_Independence</u> (CVL-22) and <u>USS\_Pensacola</u> (CA-24), be declared hopelessly contaminated and beached to let their radioactivity decrease by natural decay
- Scientific equipment be retrieved where it was safe to do so.

# Decontamination Operations

Decontamination operations encountered the same basic obstacle that had been encountered during the program to develop decontamination methods. The radioactive particles were firmly attached. Initial efforts produced significant results by removing lightly attached radioactive particles, but more deeply embedded radioactivity could be reduced only slowly by additional hosing and scrubbing. The exact humber of men involved in the decontamination effort cannot now be determined, but 41 percent of the task force personnel was assigned to units involved in decontamination, inspection, towing, or salväging. Many of these personnel, because of their skills or occupations however. Were not directly involved in that work. The brunt of the reboarding and decontamination effort was borne by the 8,463 target ship crewmembers, although it appears that only a portion of them actually worked on contaminated ships. See Chapter 12 for a discussion of personnel exposures.

On 7 August. In another memorandum to CJTF 1. the Chief of the Radsafe Section argued that under the conditions at Bikini it was not possible to decontaminate the target Vessels without exposing personnel to a serious tadiation hazard. Safety measures on target vessels were deteriorating, and adequate monitoring personnel and instruments were no longer available. Contamination was erratically distributed so that an individual's exposure could not be estimated. The potential of inhalation of contamination was a major concern. Furthermore, the untrained men doing the decontamination work could not be expected to follow safety precautions consistently (Reference C.0.14).

On 8 August. CJTF 1 asked the Chief of Naval Operations (CNO) to allow him to decommission, or place out of service at Bikini. 39 target vessels because with the resources at hand (Reference C.10.11):

They cannot all be made absolutely safe to board in the near future for sufficiently long periods to either prepare them for movement to Pearl [Harbor] or to assess fully in all cases the damage sustained.

During this period, problems developed in strict enforcement of radsafe regulations. Inadequate supervision of men doing decontamination work on Prinz Eugen and New York was reported (References C.O.11, C.2.2, and C.2.3). Monitors visiting Prinz Eugen noted an apparent indifference among the ship's officers to the 0.1 R/24 hours standard, and the monitors suspected some men had been on the ship overnight (Reference C.2.2). As a result there was concern that unbadged working parties aboard the target ships alight have overexposures similar to those recorded by their monitors (Reference C.0.8). No substantiation of these serious allegations about activities on Prinz Eugen can be found in the ship's deck log or that of USS Rockingham (APA-229) where its evacuated

crew was berthed. The decontamination report (Reference C.2.54) written by <u>Prinz Eugen's commanding officer on 13 August appears to indicate a definite</u> concern for radsafe matters.

The officer in charge of target ship monitors complained that work on the target ships had increased to the point where his men could not adequately protect the decontamination crews. As an example, he described the situation on <u>USS Salt Lake City</u> (CA-25), where from 3 to 7 August four of six monitors teceived exposures in excess of 0.1 R/24 hours, along with twenty other personnel of the ship's working teams (Reference C.0.11). On 10 August, the Medico-Legal Board recommended that work cease on <u>Salt Lake City</u> until 20 September, and the board's chairman in a minority report called for the ratio of monitors to decontamination personnel be increased from one to sixteen to one to ten and for all personnel working on target ships to be badged (References C.0.8 and C.0.21).

Discovery of Plutonium Contamination

Into this situation a new element was introduced (Reference C.9.185, p. 13):

On 9 August. The Director of Ship Material requested the Radiological Safety Officer and the Commander Target Group to visit ships on which ship's forces were employing the detailed decontamination procedures. During that inspection, samples of materials were obtained from areas of the wardroom of PRINZ EUGEN for which geiger counter readings showed radiation intensities sufficiently low to permit extended personnel exposure (8 hours) without danger of injury. An analysis of the samples revealed the presence of alpha emitters which were not detectable with monitoring instruments in use at Bikini. Further investigation showed probable widespread presence of the alpha emitter (plutonium) in the target area even in spaces not obviously contaminated.

It is unfortunate that this discovery, which so matkedly affected subsequent CROSSROADS operations, is so poorly reported in the surviving documents. The only direct reference is the quotation above from the DSM report. It is not mentioned in the portion of the Technical Director's Report devoted to nuclear radiation (Reference C.9.209, Enclosure J), and although allusions to the existence of plutonium contamination and reports of laboratory determinations of the presence of plutonium can be found in the voluminous collection of papers of the Radsafe Section Chief, these do not appear to directly relate to Prinz Eugen.

The Chief of the Radsafe Section and his staff probably did not directly detect alpha emitters on <u>Prinz Eugen</u>. Instead, indirect evidence convinced them the hazard existed.

The difficulty of directly measuring alpha emissions with the field instruments of 1946 has been discussed earlier. The Radsafe Chief in a speech in 1947 said that beta activity was measured and then a ratio used to calculate alpha activity (Reference C.12.4, p. 23). Direct determination of alpha Contamination were made by removing samples to laboratories where analyses could be made. Field assessments were made by assuming that the alpha emitter plutonium was mixed with the other weapon debris, made up of fission products and activated materials. The ratio of this mixture was apparently assumed to be constant so that there was a ratio between the measurable radiations, gamma and beta, emitted by the fission products and activated materials and the unmeasurable alphas from the unfissioned plutonium. Since the emissions from the beta and gamma emitters decayed while the alpha emissions temained nearly constant, this ratio changed with the passage of time -- but in a way that was predictable.

The Jaboratory on Kwajalein operated by Los Alamos informed the Radsafe Advisor that on BAK&R day + 13 (7 August) 4.5 alpha counts [per minute] per square contineter of contaminated area could be expected when a survey meter gave a reading of 1 R/24 hours (presumably gamma) (Reference C.10.16). This theoretical determination was made in conjunction with samples that had been taken on 7 August from the forward lookout platform of New York. These samples had been collected by using concentrated hydrochloric acid to dissolve the paint and surface material, which were then collected for analysis. The result was forwarded by teletype to the Chief of the Radsafe Section on ID August and stated that the reading in the collected material was 25 alpha counts [per minute) per square centimeter [of the contaminated platform] for a [gamma] reading of 3 R/24 hours. The laboratory said that this count was twice as high as expected due to "washing." By this it is presumed the laboratory meant that the fission and activation products had been more easily washed away duting decontamination activities before 7 August than had the plutonium particles. It should be noted that this analysis took three days from sample collection to ceport,

The account from the DSM report continues (Reference C.9.185, p. 13):

A conference was called by the Task Force Commander on 10 August to discuss the matter <u>[Prinz Eugen</u> contamination]. As a result of this conference, continuation of detailed decontamination was considered unsafe under the existing conditions, and all further decontamination work on the targets by ship's force was ordered discontinued. Subsequently, all further work on these vessels by Task Force Personnel was limited to recovery of instruments, limited surveys, salvage work and preparations for towing from the area.

Judging from the time required to analyze and report the <u>New York</u> samples, it does not appear that the samples from <u>Prinz</u> <u>Eugen</u> taken on 9 August could have been analyzed by the next day.

There is a further difficulty with this sole surviving account of the discovery. It appears in the last sentence of the first quotation wherein "widespread presence . . . in spaces not obviously contaminated" is deemed "probable." If "not obviously contaminated" means not easily measured with existing field survey meters, then the statement is not confirmed by surviving records of the measurements that were taken of alpha contamination. Reports available after 4 September on alpha contamination in samples taken from the target vessels and sent back to Los Alamos for analysis show that alpha emissions were always reported in conjunction with gamma and beta emissions.

It seems more reasonable to assume that the phrase "not obviously contaminated" refers to more obvious criteria such as visible deposit of coral sand or presence of blast damage. What had actually been discovered was radioactivity in places that, because they were below decks or closed, were not expected to be contaminated. This probably was announced in an undated memorandum from the "Pill Counting Lab" (presumably the laboratory on <u>USS Haven</u> [AH-12] set up to analyze Program VII activation samples) to the Radsafe Advisor. The subject was "Dust Samples Taken in Crew Spaces on Prinz Eugen 9 August 1946." The memo states that B counts (the typewriter perhaps lacked Greek characters and this refers to beta counts) on four dust samples taken from certain given crew spaces were made and the results were from 0.00005 to 0.68 mc (perhaps microcuries) per gram of dust. This memo further states that the background radiation measured in these spaces by an X-263 meter was 0.10 R/24 hours (Reference C.11.31).

This discovery, along with the assumption of the presence of plutonium wherever there was any radioactive material, led to the inference that plutonium had been discovered. This assumption was perhaps reinforced by the <u>New York</u> date that showed that plutonium was actually present in paint on the lookout platform. That information became available the same day as the CJTF 1 conference.

This interpretation of the events is strengthened by a telegram sent by the Wadsafe Section Chief to the United States on 13 August and probably intended for the Oak Ridge Laboratory of the Manhattan Engineer District (Reference C.11,29).

UPON USING RATIONAL (sic) ALPHA BETAS FURNISHED BY YOU FIND INNER COMPARTMENTS ALL TARGET SHIPS HIGHLY CONTAMINATED BY ALPHAS.

The reference to the ratio provided may refer to the results of analysis of ABLE or BAKER cloud samples done at Oak Ridge and made available at some time before 9 August.

In the light of what the surviving records show to be the actual knowledge of the degree of plutonium contamination, the decision to halt all further decontamination work appears to have been prudent and conservative. As the Medico-Legal Board recorded at their 13 August meeting at 1300 (Reference C.0.9.a):

For safe guidance of the Operations from this time onwards. we need to know:

- The number of alpha particles per second per square centimeter
- b. The alpha tolerance for different types of surfaces.

Furthermore, special clothing and intensive training would have been required if major work on the target ships was to continue. According to a senior radsafe official (Reference C.11.4, p. 2):

118

In the laboratory, radioactive material was handled by remote controls. At Bikini, it was scattered over the decks of the ships. Men walked through it, tracked it around, and got it on their clothing and hands and faces. There was some tendency on the part of the men to disregard a danger which they could not see, nor touch, nor smell. It was known that the men could not taste the radioactive material. But they could eat it! The situation was fraught with grave danger if the enlisted men could not be trusted to do exactly as he was told. It became apparent that it would be necessary to subject these men to long periods of training before they could be expected to abide by the precautions which are commonplace in a nuclear laboratory.

On 4 September, Los Alamos reported by message an analysis of samples taken from target ships that showed measured levels of alpha contamination. The maximum alpha reading came from USS Skate (SS-305) periscope mast sample, reportedly taken on 19 July. This pre-BAKER test date conflicts with the DSM final report of late 1946, which states that no extensive deposits of alpha emitters were found following Test ABLE (Reference C.9.185, p. 3). This fact, plus additional circumstantial evidence, suggests that the date was a typo-graphical error, and should have read 19 August (Reference C.13.12). The periscope mast sample read 1.830 alpha disintegrations (assumed to be disintegrations per minute per gram [dpm/gm]) and 9.100.000 beta disintegrations for a beta-to-alpha ratio of 5.000 to 1. Other Skate readings were:

Bow -- 28 alpha dpm/gm. 93,400 beta dpm/gm. tatio 3,500

Frame 120 -- 0 alpha dpm/gm. beta 9.160 dpm/gm.

Base of 5-inch gun -- 50 alpha dpm/gm, 115.000 beta dpm/gm, ratio 2.300.

Four samples from <u>USS Wainwright</u> (DD-419) collected on 18 August show alpha counts of 263 (beta-to-alpha ratio 3,500). 12 (ratio 2,500), and two zero alpha counts, but both of the latter with beta.

Three samples of unknown collection date. two from <u>USS Searaven</u> (SS-196) and one from <u>USS Parche</u> (SS-364). show alpha counts of 38 (beta-to-alpha ratio 1.400), 28 (beta-to-alpha ratio 66,000), and 23 (beta-to-alpha ratio 5.600) (Reference C.11.2).

A later analysis of 31 samples from 23 target ships all indicated the presence of alpha radiation. All but six of the samples had less than 10 dpm/  $cm^2$ . Nine of the samples were 1 dpm/ $cm^2$  or less. The highest reading was a sample from <u>USS LST-52</u>, at 183 dpm/ $cm^2$  and a beta-to-alpha ratio of 677. After Test BAKER, it was calculated that <u>LST-52</u> received one of the highest radiation exposures from deposition of material in the rainout and base surge (Reference C.11.28).

There were also some later determinations at the San Francisco Naval Shipyard of alpha contamination of support ships. These are discussed later in this chapter.

### Cessation of 81kini Decontamination Efforts

As a result of the 10 August conference, decontamination efforts stopped but apparently someone proposed at a 12 August conference that the capital ships be entered for the purpose of starting their engines and machinery to pump them out and thoroughly inspecting their internal structures. The teply was a staff CJTF 1 memorandum to Commander Task Group (CTG 1.2), dated 13 August and signed by the Chief of the Radsafe Section. The tone of this document can only described as stern and didactic. It dismisses the argument that the low gamma readings would permit such operations with a terse. "This is not the case." and continues. "The widespread presence of an alpha emitter has been demonstrated." The memorandum then catalogs the sources of possible exposure of personnel on the target ships, introducing the list with the statement. "The following facts have been observed in these vessels." It concludes with several "uncontestable conclusions." These conclusions amounted to a denial of the request to enter the ships on a large scale (Reference C.11.30).

It was directed that no one go aboard ships after 14 August without a badge. However, while the percentage of badging does increase after 14 August. 100 percent badging was not achieved. Only recovery of instruments, limited surveys, salvage work, and preparations for towing were allowed (Reference C.9.185, p. 13; Reference C.11.3). Virtually no target ships were boarded on 11 August, and only a few on 12 August. Beginning on 13 August some limited decontamination was done as part of the effort to ready the ships for towing. Inspections of target ships were conducted between 13 and 19 August.

CTG 1.2. however, requested that restoration work on <u>DSS Cartetet</u> (APA-70). <u>USS Converginan</u> (DD-371) and <u>Wainwright</u> be continued. All surfaces of spaces to be occupied by personnel for working, berthing, or messing were to be painted, presumably to prevent alpha emitters from becoming airborne or being picked up on the men's clothing or skin (Reference C.10.2). In the end, however, only <u>Converginan</u> was decontaminated sufficiently to be remanned. On 28 August, it departed kwajalein for Pearl Harbor under its own power, arriving there on 6 September (Reference C.0.3, p. 3; Reference C.9.206, p. V~(D)~6). On advice from the Radsafe Section, all work on <u>Carteret</u> and <u>Wainwright</u> ceased on 18 August. The crews of both ships were transported home on 20 August because of possible overexposure to radiation (Reference C.0.3, p. 3).

Although radiation levels in the lagoon and on the atoll's islands were below tolerance levels, the accumulation of radioactivity in the support ships' evaporators and saltwater piping and in the matine growth and tust on their hulls below the waterline presented an increasing problem. The base of operation had to be moved from Bikini, and Kwajalein was selected (Reference C.10.4).

Contamination made it difficult to prepare most target ships for movement to Pearl Harbor or to systematically study the damage they had sustained. A series of decisions resulted in towing target ships to Kwajalein beginning 19 August. By 5 September the last of the target ships afloat had loft Bikini (Reference C.10.1); Reference C.0.3, p. 1; Reference C.0.4, p. 1). By 26 Septomber 1946, Bikini Atoli was completely evacuated.

All survey and construction activities at Bikini were rapidly brought to a close, and the atoll was completely evacuated. For safety and security reasons, a recommendation was made to CNO to declare Bikini Lagoon a defensive sea area. CNO ordered continued surveillance of this area to restrict entry of foreign, merchant, or private shipping that had not beep duly authorized. This restriction was promulgated through a Notice to Mariners declaring the area bounded by latitudes  $11^{\circ}28$ 'N and  $11^{\circ}43$ 'N and longitudes  $165^{\circ}10^{\circ}E$  and  $165^{\circ}35^{\circ}E$  dangerous to shipping and personnel, and restricting entry except to those duly authorized by proper authority. (Reference C.0.31, p. 6).

### TARGET VESSEL OPERALIONS AT KNAJALEIN

All target vessels at Bikini had some ammunition on board to serve as test material. Some ships had a great deal, placed there to determine the effects of the atopic boxb on warships having different loading conditions. For example, USS Nevada (BB-36) had more than 1,100 tons of ammunition. Most of the ammunition was service type and highly stable, but some experimental ammunition and some obtained from foreign navies was included. Some service ammunition had been flooded. There was a presumption that ammunition on certain ships was, or would soon become, unstable from the heat and pose a considerable and growing hazard. Its removal would be necessary, and the longer such operations were deferred the more dangerous the work would become. After careful consideration. it was decided that the total hazard would be less if the work were accomplished in 1946 than if it were deferred to a later year when the radioactivity would be reduced but the explosive hazard increased (Reference C.11.4). Because the ships were contaminated, work parties had to wear special clothes and were accompanied by radsafe monitors when aboard them. When working below deck, the men were required to wear rescue breathing apparatus.

For work on the target vessels, the Kwajalein Maintenance Force. Task Unit (TU) 1.2.12 was formed on 28 August 1946 (Reference C.11.5). The flagship was Haven, on which the radsafe unit had its headquarters and laboratories. Geneva was the hotel ship and APL-27 was the change ship, where working party members donned their protective clothing before going aboard target vessels and where they removed that clothing and showered after their work was done. In addition, the unit consisted of USS Conserver (ARS-39), USS Carrent (ARS-22), LCI-329, LCI(L)-549, LCI(L)-615, YF-753, and assorted small creft for towing, azmunition disposal, and personnel transportation (Reference C.0.22, pp. 4 and 5). At its peak, the total manpower of the unit was approximately 1.500 officers and enlisted men. Haven departed Kwajalein on 10 October, Geneva on 13 October, and <u>Current</u> departed on 2 December: <u>Conserver</u> remained until February 1947.

On 29 August. CTG 1.2 (farget Vessel Group) directed the removal of the approximately 2.700 tons of unstable ammunition from target ships by personnel of the Ammunition Disposal Unit of JTF 1 (Reference C.11.6). Actual unloading commenced on 4 September. The unit consisted of about 10 officers and 275 enlisted personnel (Reference C.10.18). Its personnel were divided into six working teams (one initial boarding team and five ammunition disposal teams).

each consisting of one or two officers and about 40 enlisted personnel. The duties of the initial boarding team were to board, make initial inspection for flooding and other hazardous conditions, obtain current radiological data with the assistance of radsafe monitors, and obtain information pertinent to asmunition inspection and removal as required. When conditions were satisfactory for working on a vessel, the initial boarding team proceeded with opening up, ventilating as necessary, and rigging hoists and other equipment required to proceed with ammunition removal. Then an assigned ammunition team or teams would remove and transfer the ammunition to the lighter YF-753 for disposal at sea or, in certain cases, would leave the ammunition to proceed and tow the vessel itself to sea and dump the ammunition directly into the sea (Reference C.11.5, p. 2).

Ammunition was removed from each target ship without using any of its own facilities or equipment. Sufficient equipment was obtained to undertake five ammunition-handling operations at one time, which might be on one to five ships. The basic plan was to use pneumatic hoists to lift the ammunition topside on the ship. Portable lighting was used in the magazines and handling rooms. Spaces containing concentrated ether fumes or other explosive gases were ventilated before commencing ammunition removal. Flooded spaces were pumped out sufficiently so that men wearing tubber boots could work in them. Wood chutes were used to transfer the ammunition from the ships' topside to YF-753. To minimize carrying the ammunition across the decks of the ship and barge, rollet Sections were used where practicable.

Personnel were transported to and from work in LCMs. Five of these were each equipped with a gasoline-engine-driven air compressor and generator. These were connected, respectively, to the portable hoists and the portable lights. A gasoline drum in each equipment boat held a reserve fuel supply.

Working party members entered the change ship, API-27, from the clean side. Each was issued freshly laundered fatigues, canvas or rubber gloves, rubber boots or field boots with removable canvas covers, and a rescue breathing apparatus, intended to prevent inhatation of radioactive particles. Members of the working party then boarded an LCM from the contaminated side of the change ship for their trip to the target vessel. Upon return to the change ship, each man showered twice, was checked with a Geiger counter to make sure he had removed all contamination, and then changed into his regular clothing. Used canvas gloves and canvas boot covers were thrown overboard. Fatigues were laundered for reuse. The rescue breathing apparatus was checked for contamination and sterilized. Rubber boots and gloves probably were washed (Reference A.2, pp. 143 and 144: Reference C.11.5, pp. 1 and 2).

Ammunition removal was exhausting and potentially dangerous work. Personnel suffered considerably from being required to work fully clothed and wearing the breathing apparatus in the hot, humid Kwajalein climate. Under these trying conditions a man could work only about 30 minutes below decks without a topside break for air. The breathing apparatus restricted their vision, and lighting inside of the ships was poor. The belief, however, at the command level apparently was that the rate of ammunition deterioration required immediate action if an even greater overall hazard was to be avoided (Reference C.11.4, p. 3).

Pensacola posed the most urgent removal problem due to the deterioration of the gunpowder for the 8-inch guns in its forward magazines. With resultant concentration of ether-alcohol fumes believed to be within explosive limits (Reference C.0.22, p. 4). The same conditions, to a lesser degree, were feit possible in some of the other target vessels. CTG 1.2 issued supplementary orders to the officer in charge of the Ammunition Disposal Unit covering Fonsacola. The progressive opening up of <u>Pensacola</u> preparatory to removal of ammunition was initiated following the procedures laid down by CTG 1.2 (Reference C.0.4, p. 4). In early September ammunition breakout was started on <u>New</u> <u>York</u>. <u>Carteret</u>, and <u>Wainwright</u>.

By mid-September, because of the acute shortage of radiological monitors questions were raised as to the advisability of continuing ammunition disposal at the rate of progress imposed earlier (Reference C.0.23, p. 4). At this time questions were also raised by CTG 1.2 regarding the dangers attendant to leaving large quantities of stable ambunition aboard ships exposed to tropical temperatures in unventilated and uncooled magazines without adequate inspection and surveillance. He cautioned that removal of such ammunition would multiply the difficuities of the ongoing task several times over and should not be considered lightly. Although he felt that the hazard of leaving the ambunition aboard was acceptable in view of the well-established stability of the smokeless powder under the expected range of temperature, he recommended that the advice and recommendations of the Navy Bureau of Ordnance be obtained before a decision was made (Beference C.0.23, p. 6).

The potential for plutonium contamination continued to be a concern, and rescue breathing apparatus was used to reduce the risk. One monitor was especially concerned because as time passed the detectable emissions. Four warning signals." were "dying away." leaving behind the difficult-to-detect alpha emitters (Reference A.2. p. 147). Urine testing continued, apparently on a relatively large scale. This testing failed to produce any positive findings of alpha exposure (Reference C.0.32, p. 4; Reference C.1).12).

On 14 September the concern about alpha emitters manifested itself from another quarter in instructions from the Commander in Chief, Pacific (CINCPAC), prohibiting all hoisting and underwater repairs on boats at Kwajalein. Apparently CTU 1.2.12 was able to get permission to follow instead the 9 September message from CJTF 1 to commanders of nontarget ships suspected of being contaminated, which allowed scraping of underwater portions of the hulls as long as the working area was kept wet (Reference C.9.185, p. 136). Because no copy of the directive could be found, boat repairs at Kwajalein were temporarily curtailed (Reference C.11.5, p. 2).

Despite the severe problems imposed by the shortage of monitors and handling equipment, the ammunition removal and disposal proceeded according to schedule without incident. During the week ending 13 October, radsafe operations were routine, but the instrument situation was becoming critical due to the lack of spare parts. Only ten X-263 Geiger counters were operable, and no spare parts for repairs were on hand. None had been received since 14 August, and it was estimated that within 3 weeks none of the instruments would be operating (Reference C.0.24, pp. 3 and 4). By the week of 19 October, ammunition safety tasks (i.e., removing and disposing of unstable ammunition and obtaining surveillance powder samples from target ships) were completed. Approximately 1.036 tons of ammunition had been removed from about 35 ships in about 45 days with no serious injuries (Reference C.11.5. p. 1). In the process, 145 rescue breathing apparatus, 900 green fatigue shirts, 900 pairs of green fatigue trousers, 660 pairs of undershorts, 1.500 undershirts, 500 pairs of field shoes, 1.700 towels, 6.180 pairs of canvas work gloves, and 12.500 canvas shoe covers had been discarded. In addition, 150 rescue breathing apparatus were usable but contaminated, as were air compressors, generators, air hoists, and portable blowers used in the operation (Reference C.11.5, pp. 3.4). Exposures for the Ammunition Disposal Unit are discussed in Chapter 12.

In mid-October Commander Marianas requested Commander Service force. Pacific (ComServPac), to transfer the Ammunition Disposal Unit intact to Guam to dispose of surplus ammunition. In view of the task they were just completing and the length of time they had been in the forward area, Commander Navy Task Group (CNTG) JTF 1 strongly advised against such a transfer and recommended that the entire unit be given leave before reassignment. ComSetvPac concurred (Reference C.0.24, p. 2).

Concurrent with the completion of this disposal. CNO ordered USS <u>Gasconade</u> (APA-85). <u>USS Failon</u> (APA-81). <u>USS Crittenden</u> (APA-77). <u>USS Brule</u> (APA-66). <u>Independence</u>, and <u>USS Mayrant</u> (DO-402) towed to San Francisco and <u>Hughes</u>. <u>Pensacola</u>, <u>Salt Lake City</u>, <u>New York</u>. <u>USS Rhind</u> (DD-404), and <u>Nevada</u> towed to the Puget Sound area for examination. The towing was to be in the order listed. with one ship arriving in each area every 2 months. Only six of these twelve ships were ultimately towed to the United States. <u>Brule</u>, <u>Fallop</u>. <u>Rhind</u>, and <u>Mayrant</u> were eventually sunk in the vicinity of Kwajalein. <u>New York and Nevada</u> were towed to Pearl Harbor for inspection and were later sunk off Oahu.

In connection with this. CNO directed that CNTG insure. Insofar as practical in the forward area, the removal of all ammunition, including projectiles, before the vessels' arrival at the mainland. This, of course, called for a radical change of plans for the Azmunition Disposal Unit at Kwajalein. The rollup orders already issued for its dissolution on 23 October were cancelled and action was initiated to transfer the entire unit to Atoll Command Kwajalein (AtComKwaj) on 23 October at the same time that the target ship maintenance unit was transferred.

When the rollup plans were cancelled, the officer in charge of the disposal unit flew to Pearl Harbor to confer with CNTG. As a result of this conference, it was decided that removal of powder and small-caliber projectiles before the vessels' departure from Kwajalein would be practical and could be done well within the time limits imposed by the towing schedule. Removal of the largecaliber projectiles however, especially the 14-inch projectiles in <u>New York</u> and <u>Nevada</u> and the S-inch projectiles in <u>Pensacola</u>, would present a very difficult, if not impossible, problem in view of the limited facilities at Kwajalein, but the task was initiated (Reference C.0.25, p. 1). All unstable ammunition and all pyrotechnics, catapult charges, igniters, detonators, boosters, torpedo expelling charges, and bulk black powder were removed from all target vessels at Kwajalein.

The status of ammunition in the eight target ships that were finally towed from Kwajelein was (Reference C.0.25, p. 12):

USS Crittenden (APA-77)	No ammunition aboard
<u>USS Gasconade</u> (APA-85)	No ammunition aboard
USS Hughes (DD-410)	No ammunition aboard
USS Independence (CVL-22)	No ammunition except two-thirds of the unfuzed normal boab allowance remained aboard
<u>USŞ Nevada</u> (AR-33)	Two-thirds of the normal allowance remained aboard
<u>USS New York</u> (BB-36)	Ten percent of the 14-inch projec- tiles and eight percent of the re- maining normal allowance remained aboard
<u>USS Pensacola</u> (CA-24)	No ammunition except two-thirds of the 8-inch projectile allowance and two-thirds of the unfuzed bomb allowance remained aboard
US <u>S Sait Lake City</u> (CA-25)	Ten percent of the normal allow- ance remained aboard.

When the initial phase of the annunition disposal was completed, the last of the experienced radiological ponitors departed Kwajalein. When work was resumed to unload the target ships due for transfer to the continental United States, the only available monitors were still receiving additional training at Kwajalein after intensive instruction in Washington. D.C. In addition, serious morale problems were developing in the Ampunition Disposal Unit due to doubts and unanswered fears about the effects of radiation and fatigue due to the long, uninterrupted arduous and hazardous duty.

The officer-in-charge dispatched a lotter dated 11 November 1946 to the Chief, Navy Bureau of Medicine and Surgery (BuMed) (Reference C.H.7) detailing the concerns of personnel in his unit regarding radiation hazards. He described the problems in the use of the rescue breathing apparatus and the added hazards in handling heavy ammunition when wearing the apparatus in confined dangerous spaces. He recommended better indoctrination and training for those working under similiar conditions, suitable limitation on the length of continuous duty, and -- if it was determined that a protective mask was required -- discontinuance of all unloading until a suitable mask could be developed.

On 29 November the officer-in-charge was advised by the Safety Advisor to JTF 1 (Reference C.11.8) that the answers to some of the questions asked by the men were classified and, in any event, the officer in charge of the Ammunition Disposal Unit should discuss these questions with the Radsafe Advisor and then disseminate the proper information to his personnel. He was further informed that the rescue breathing apparatus was considered necessary by senior radsafe experts and would continue to be worn and that if all safety regulations were complied with no hazard to health was involved in the work. Hence, Buked did not feel it was necessary to limit the time spent in this type of work (Reference C.11.8). Clearly, operations at Kwajalein were intense during the early months of the target fleet's presence. The order from CNO to remove additional amounition prevented the dissolution of the Amounition Disposal Unit and Forced work to continue, apparently with the same personnel (Reference C.0.26). From 1 September 1946 to 31 December 1946, 5.734 badges were issued to personnel of this unit. The period of heaviest issue was September and October: thereafter, very few badges were issued (Reference C.13.4).

The deck logs of <u>Conserver</u> and <u>Current</u> indicate that these ships were extremely busy during this period in mooring. diving, towing, and housekeeping operations on the target fleet at Kwajalein. Between 31 August and 30 November 1946, 14.532 personnel decontaminations (similar to those described in Chapter 2) were carried out aboard the change ship APL-27, an average of 150 each day (Reference C.j3.7).

In October the preliminary examination and securing of target ships at Kwajalein was completed. On 1 October. CNO directed that upon dissolving JTF 1. these ships and their caretaking unit be turned over to CINCPAC.

TARGET SHIP ACTIVITIES AFTER JOINT TASK FORCE 1 DISSOLUTION

In accordance with directives of the Joint Chiefs of Staff (JCS), steps were carried our rapidly to complete the work of the task force and to turn over operational control of all units to appropriate commands. As of 24 October no ships or units remained under the operational control of the CJTF 1, and only staff activities were left. The task force was formally dissolved on 1 November 1946 (Reference C.9.206, pp. V-(D)-5 and V-(D)-6).

In all. 63 target ships (12 were remanned after CROSSROADS) passed through Kwajalein. Of these. Al remained at Kwajalein until sunk. These ships were radiologically contaminated and could not be disposed of until cleared by CNO and Radiological Section BuShips.

On 31 January 1947. Chief Bulled issued additional safety regulations for work on the target ships. The potential internal radiation hazard was emphasized. The exposure of persons boarding ships was to be kept to a minimum, and their exposure was to be appropriately interrupted to reduce the chance of injurious effects. All persons who were to board target ships and who might encounter radiation were to have a preduty physical examination. All personnel connected with work on target ships were to have monthly physical examinations with special attention to their hands. Each individual was to have a weekly utinalysis, including a gross beta count.

Various measures were to be taken to protect the men while at work. A change house was to be provided where the men would dress in hard hats, coveralls fastened at the neck, canvas or rubber gloves, canvas bootles over their boots or work shoes, appropriate breathing apparatus, and goggles. Each man was to have a film badge pinned on the left breast of his coveralls. The tolerance limit was 0.1 R per 8-hour day. A work party could not board target vessels without the permission of the radsafe unit and each party had to be accompanied by a monitor. While aboard a target vessel, the men were not to eat. drink. smoke. or to chew gum or tobacco. They were to avoid pools of water. dust clouds, and piles of rust, paint chips, or the like since each might be a radiation source. When below decks, the men were to wear the rescue breathing apparatus at all times. Upon returning to the change house they were to turn in their film badges, disrobe, and wash thoroughly. The regulations appear to have broken little new ground but instead codified existing CROSSROADS practice (Reference C.11.9, pp. 1 through \$).

On 3 March 1947, Navy Bureau of Personnel reduced the Kwajalein ships security detail to 5 officers and 127 enlisted men. Both CINCPAC and AtComKwaj considered this to be a minimum number. However, on 31 March there were only 27 men in the unit. The attempt by Kwajalein personnel to keep up with the towing schedule in spite of the manpower shortage operated to contravene the requirement for radiological safety (Reference C.11.10, p. 2).

in a letter to AtComkwaj dated 9 April 1947, the senior monitor assigned to the radsafe section at Kwajalein on 23 January described violations of radsafe procedures he had seen or had good reason to suspect during his time there. Upon arrival he had been given some instructions about radsafe procedures to be followed in working on the target ships, but be had been shown no wtitten regulations. In his work, this Navy ensign observed men smoking and lounging about the decks of target ships and boarding parties going aboard <u>Pensacola</u> without first passing through the change ship. He believed that personnel sometimes ate aboard the target vessels and that work parties unaccompanied by a monitor sometimes boarded them. He believed looting was common. The monitor was also very concerned that men were not wearing rescue breathing apparatus while on the decks of the target vessels, but the BuMed regulations of 31 January did not make it mandatory in all circumstances (Reference C.0.27, pp. 7 and 8).

When the ensign reported his observations and suspicions to the Medical Radsafe Officer at Kwajalein, the doctor showed him a list of safety precautions for boarding target vessels sent by BuMed. From the monitor's letter it cannot be determined, however, whether these were the regulations of 31 January as amended or some other document. The doctor apparently had not been aware of the violations of BuMed's rules. On 13 March the monitor showed the safety precautions to the officer in charge of the change ship. Together they checked fatigues and found "numerous" high readings. The monitor's letter gives the impression that the officer in charge of the change ship had not previously seen the list of safety precautions.

The Senior monitor also showed the precautions to the captain of the salvage vessel from which work parties had boarded <u>Pensacola</u> without passing first through the change ship. The captain visited the radsafe officer to discuss the precautions. The monitor's revelations led to a meeting on 20 March attended by the Medical Radsafe Officer, the captains of <u>Conserver</u> and <u>Current</u>. AtComKwaj, the monitors, and another official. Greater efforts to follow BuMed's guidelines apparently followed. The monitor also had been concerned about the unreliability of the radiation detection instruments, but the meeting did not produce actions that relieved his apprehension. He wrote that "our instruments are still very unreliable and I feit unsafe in boarding without proper equipment. I told [the radsafe officer] that I thought operations should cease because we knew so little about the dangers we were dealing with" (Reference C.0.78).

The complaints of the senior monitor to AtComKwaj were passed to higher authorities. CINCPAC. in a letter endorsement to Chief BuMed. stated that AtComKwaj had been instructed on 10 April to fully comply with existing safety regulations at the cost of curtailing security measures and. if necessary, failing behind in rowing schedules. He noted that a serious health hazard existed if safety regulations were not strictly maintained (Reference C.11.22).

The problem was essentially one of manpower, as less than 200 personnel were assigned to the ship's security detail. This was too few personnel to maintain the desired schedule of preparing ships for tow back to Navy ship-yards. This fact and its consequences were acknowledged in a letter from CNO to Chief of Naval Personnel dated 15 July 1947. The letter observed that in many instances certain recognized safety precautions were violated, attribut-able to the towing schedule, inadequate indoctrination of men, and insufficient supervisory personnel. It stated, however, that in the opinion of responsible persons experienced in the subject that, in fact, no individual actually was subjected to danger. In order to substantiate that opinion, the letter stated that a broad survey of all persons involved had been instituted (Reference C.0.33).

The results of this broad survey have not been located. The survey may refer to the blood tests administered to all Navy CROSSROADS participants (Reference C.11.23). There is evidence that action at Kwajalein in this regard was underway at least by April 1947. A 17 May message from AtConKwaj to BuMed advised that blood tests given at Kwajalein established that exposed personnel were disqualified from additional work detail. He noted that the results had urgent medical implications and impacted on personnel rotation policies (Reference C.11.24).

A standard gamma source to calibrate instruments was provided by 5 June 1947. and the hope was voiced that a suitable elpha counter could be provided "eventually." Moreover, the bureaus concerned were going to supply "essential technical help." apparently meaning more personnel (Reference B.11.1). This last effort probably was related to the monitor shortage at Kwajalein. During April 1947. the radsafe unit was down to one monitor: hence only one working party at a time could enter radiologically suspect areas (Reference C.0.29).

Commencing in June 1947. Kwajalein and all shipyards where target ships were located began monthly reports of personnel film badge exposures. These monthly reports to BuMed continued until November 1948. Until at least July 1948, a ship's security detail existed at kwajalein to care for the target ships. Protective clothing was apparently worn by U.S. shipyard personnel when working with the CROSSROADS target ships, judging from an inspection photo (Figure 38) of the engine room of Hughes at Puget Sound in April 1948.

### CONTAMINATION OF SUPPORT SHIPS

The majority of the support ships did not reenter Bikini Lagoon until after 31 July when the lagoon water was below 0.1 R/24 hours. Within 3 days.

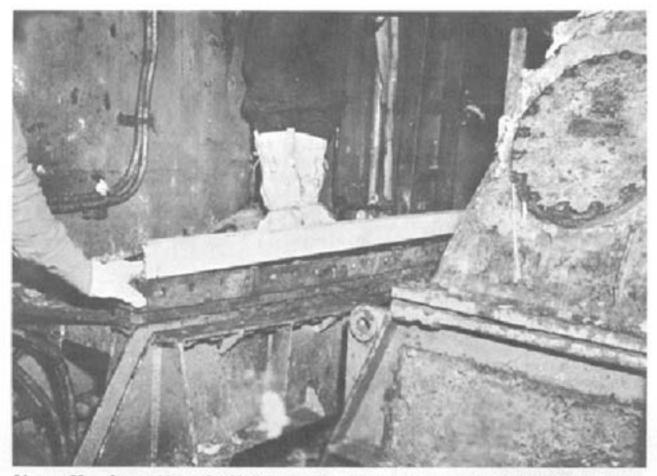


Figure 38. Inspection of <u>USS Hughes</u> (DD-410) at Puget Sound Naval Shipyard in 1948 showing workers wearing protective shoe covers and gloves.

concentrations of radioactive contamination were observed in the marine growth and rust on their hull exteriors at the waterline. Even though the water in which the ships were anchored showed a radiation intensity of only about 0.01 R/24 hours, the radioactivity collected on the hulls to such an extent that several ships had interior readings in the vicinity of the waterline exceeding 0.1 R/24 hours (Reference C.9.185, p. 18).

# Decontamination at 81kin1

On 29 July, faced with increasing radioactivity in the water where the ships were anchored and hoping to deal with problems of contamination, the support ships and the target ships that had been cleared as radiologically safe were moved to a new anchorage in the southeast portion of the lagoon (Reference C.9.185, p. 19; Reference A.2, p. 101). All ships were ordered to list ship, that is, change ballast, causing them to list and expose portions of their hulls below the waterline for scraping (Reference C.9.185, p. 19). Rather than immerse themselves in the lagoon water, personnel were to use long-handled scrapers (Reference C.10.7). Because the ships' evaporators used to distill freshwater concentrated radiation from the lagoon water in the scale on the inner surfaces of their shells and tubing, radiation levels near some of them exceeded the 0.1 R/24 hours limit.

Orders were issued not to open evaporators without specific authorization of the radsafe section and then only with a monitor present (Reference C.10.3). Experiments showed that the evaporators would not pass radioactivity over into distilled water if they were operated at somewhat reduced rates. Orders to operate at reduced rates were issued, although sources available disagree on whether the approved rate was 75 or 80 percent (Reference C.9.185, p. 19; Reference C.10.6). To remove some of the contaminated scale, ships were to use the cold-shock" treatment; that is, cold water was run through the hot evaporator tubes that had accumulated radioactive scale. The pipes' rapid contraction caused the scale to flake off and be flushed out (Reference C.10.6). To decrease the formation of new scale, ships were ordered to use a standard scale reduction technique of introducing a mixture of boiler compound and cornstarch continuously into the evaporators (Reference C.10.1). In an effort to reduce contamination on hulls and in evaporators, a number of support ships left the lagoon for one-day trips in the open ocean to flush the sides and interior systems with clear saltwater.

These beasures reduced the radiation [eve] inside most ships to 0.1 R/24 hours (gamma) or less. To keep radiation levels down, the ships, where possible, were kept in water indicating 0.001 R/24 hours (gamma) or less. Numerous exceptions to this were necessary, however, to carry out the duties of the task force. Ships used for salvage, radsafe, and survey work sometimes needed to enter waters with higher levels of radioactivity. One source indicated that in some cases a ship's crew was evacuated and the ship was allowed to stand idle, presumably in water with low radioactivity levels, until the readings inside fell below the 0.1 R/24 hours level (Reference C.9.185, p. 20). The source does not indicate the number of ships in this category.

# Shift to Kwajalein

On 11 August, CJTF 1 asked the CNO for permission to shift the task force's base to Kwajalein, asserting that the tendency of ships to accumulate radioactivity, especially in their evaporators and in the marine growth on their hulls, mandated leaving Bikini. He emphasized that no hazard to Kwajalein would result and that preparations for CHARLIE (the anticipated third CROSSROADS shot) would not be compromised (Reference C.10.4).

On 19 August the task force was ordered to shift base to kwajalein. Nontarget ships that had reentered the lagoon were monitored before departure and given conditional operational clearances, subject to employing safety procedures to meet each ship's condition. Most were restricted on the amount of time personnel could spend in certain compartments and near certain pieces of equipment (Reference C.9.206, p. V-(D)-4: Reference C.9.185, p. 20).

#### Commander Joint Task Force 1 Letter of 19 August 1946

Although it was hoped that natural decay and steaming in the open ocean would minimize radioactive expoure of personnel, the Chief of Staff of JTF 1 sent a letter on 19 August to commanding officers of all ships that had been in the lagoon between 25 July and 10 August and hence were radiologically suspect. He wrote that before these ships could be considered completely clear. Further monitoring would be needed, especially to ensure the safety of personnel scraping ships' bottoms or working on their evaporators. Arrangments were being made for radiological monitors to be available at naval shipyards and principal ports on the U.S. west coast and Pearl Marbor. Commanding officers of the ships involved were to request these monitors before having evaporators opened. having work done on other contaminated machinery, or entering drydock (Reference C.9.185, pp. 144 and 145).

After further study, the task force radsafe and safety advisors decided the precautions set forth in the letter of 19 August were inadequate to protect personnel from alpha emitters associated with the detected radiation. Moreover, considerable cleaning would be required to eliminate radioactivity, and the cleaning itself and the wastes created would pose yet another problem. After a conference with the safety advisors, the ComServPac on 29 August issued special precautions to be applied to all vessels that had spent more than 10 days in Bikini Lagoon after 25 July (Reference C.9.185, p. 21). In summary, the precautions were as follows:

- 1. Avoid drydocking until further notice
- Avoid opening saltwater plumbing.
- Avoid exposing the external surface of the hull below the waterline
- Avoid exposing personnel to fuges or dust from welding. cutting, or other work on contaminated saltwater surfaces.

He also recommended the ships be examined at San Francisco or Pearl Harbor to determine their exact radiological status and to indoctrinate crews in proper radsafe procedures (Reference C.10.5).

C3TF 1 concurred with ConServPac, but argued that ships in the western Pacific should return to Guam for radiological monitoring. Be advised that JTF 1 was organizing a monitoring group for use at San Francisco, Pearl Harbor, and other ports as required. He recommended that docking or yard work on the affected ships be avoided until they had been monitored and declared radiologically safe. Finally, he suggested that the precautions applied to the ships also be applied to the small boats they carried (Reference C.9.185, p. 22). On 28 August CNO directed compliance with these recommendations and two days later ordered all small boats found radiologically unsafe sunk in deep water (Reference C.9.185, pp. 22 and 23; Reference C.10.4, p. 1).

# RADIOLOGICAL CLEARANCE OF NONTARGET SHIPS

CJTP 1 dispatched his Chief Medical Officer to head the program for giving radiological clearance to nontarget vessels. On 26 August the medical officer established his headquarters in the offices of the 12th District Medical Officer at San Francisco Naval Shipyard. He encountered immediate difficulties. Radsafe monitors were not available at San Francisco in numbers sufficient to check the many ships expected to arrive during the coming weeks. Monitors were drawn from the ranks of those who had served during CROSSROADS and from the radsafe organization at Kwajalein. But at some cost to operations there. The first graduates of the JTF 1 radsafe school became available for duty by mid-October. Although some were assigned to Kwajalein, most were assigned to shipyards or laboratories on the west coast or in Hawaii where they worked on problems presented by the contaminated nontarget vessels. Because no safe and effective methods had yet been developed for removing the known or suspected contamination on the nontarget ships, only a list of precautionary measures could be given to ships' captains. These measures were principally as follows (Reference C.9.185, p. 24):

- Treat evaporators using starch and boiler compound, cold shocking, or, in the case of vapor compression stills, standard cleaning
- Sink at sea all radiologically hazardous equipment made from wood and plant fibers, such as lines, fenders, nets, camels, and swabs
- Prohibit burning, welding, chipping or wire-brushing of saltwater lines or exposed saltwater surfaces except under the supervision of a monitor. Scraping is permitted on surfaces provided they are kept wet at all times.
- 4. When dropping anchor avoid the dust raised from the outgoing chain. keep the anchor wet, use gloves when handling the anchor and chain, and discard the gloves after use
- Sink scall boats with readings greater than 0.1 R/24 hours.
- Scrub urinals and head troughs with abrasive cleaner or acid solution.

In an effort to determine accurately the contamination level on nontarget ships exposed at Bikini. Commander Western Sea Frontier (ComwestSeaFron) on 30 August ordered Commander 12th Naval District to drydock one of the destroyers from the joint task force at the San Francisco Naval Shipyard. USS Laffey (DD-724) was drydocked and inspected on 5 September under supervision of the JTF 1 Chief Medical Officer. The underwater portion of the hull and portions of the saltwater plumbing were monitored. Shipyard workers in protective clothing and breathing apparatus chipped off samples of rust, paint, and scale. Radiation levels detectable with hand-beld instruments were found to be below the accepted tolerance level. Samples were also taken from USS\_Whiting (AV-14). USS Henrico (APA-45), and USS Mount McKinley (AGC-7). The samples were sent to the University of California's Crocker Radiation Laboratory for further analysis, especially for the presence of alpha emitters. Encouraged by the low readings, the medical officer gave permission for overhaul work on <u>USS\_Walke</u> (DD-723). USS Barton (DD-722). USS Lowry (DD-770), and Laffey, except that work involving the exterior of the hull below the waterline or the saltwater plumbing had to await the arrival of sufficient monitors. A decontamination center was established for yard employees working on the ships (Reference C.9.185, pp. 28 and 32; Reference C.12.2, pp. 84 and 85).

In late August and early September, however, concern increased in command circles that unless a means could be found to service the underwater hulls and saltwater plumbing of the nontarget vessels, they would eventually be rendered useless.

On 9 September 1946. CJTE I sent a letter (Serial 079) to commanding officers of all nontarget ships suspected of being contaminated. His purpose was to make them aware of the discussion in progress, to summarize safety pretautions, and to give information on the clearance procedure under development (Reference C.9.185, pp. 125 and 145). His letter, however, did not (Reference C.9.185, pp. 25 and 26):

- Establish adequate decontamination procedures or a plan for developing them
- Establish the final tolerance level for alpha emitters. the alleged principal hazard
- Assign responsibility for decontamination and final ⊂learance.

During the next several months the Navy put considerable effort into filling these gaps.

ConfidestSeaFron on 11 September recommended to CNO that highest priority be given to providing staff for the JTF 1 Medical Officer, that BuShips have the responsibility for developing decontamination methods, and that the DSM be dispatched to the west coast as BuShips' representative. On 13 September CNO advised that ComWestSeaFron and BuShips had been assigned the responsibility and that the DSM was on his way, to atrive on 17 September (Reference C.9.185, pp. 26 and 27).

### Decontamination Experiments at San Francisco Naval Shipyard

Meanwhile, efforts to measure contamination continued. On 12, 13, and 19 September portions of <u>Laf(ey's</u> hull were sandblasted and particle samples collected in tilter devices set up nearby. A section of contaminated saltwater pipe was burned through in a small, closed compartment and particulate samples collected in a filter device (Reference C.9.185, p. 29). The samples were taken to the University of California Crocker Radiation Laboratory for analysis.

Methods for cleaning contaminated saitwater lines were tested. On 13 and 17 September various acid solutions were pumped into sections of Laffey's saltwater plumbing and then the sections were flushed a number of times. The result was a considerable reduction in radiation levels. These experiments were judged completely successful. Also on 1? September preparations were made to test acid solutions on the saltwater plumbing of a second ship. <u>Mentico</u> (Reference C.9.185, pp. 30 and 32).

The DSM arrived on 17 September, and during the next few days, he conferred with officials supervising contamination measurement and decontamination experiments. He inspected the work being done on LaFfey and USS Benevolence ( $\lambda$ H-13) (Reference C.9.185, pp. 30 through 33).

On 20 September. laboratory assays of cust. evaporator and condenser scale, saltwater lines, algae from the hult, and other samples from Laffey. Kenneth <u>Whiting</u>, <u>Henrico</u>, and <u>Mount McKinley</u> were completed. They indicated that the amount of plutonium (as alpha emitter) associated with fission products (beta and gamma emitters) was quite constant. Thus — the plutonium concentration — could therefore be estimated from the fission product activity with a Gelger counter (Reference C.11.17).

Taking samples for laboratory analysis was unnecessary, since analysis of the filter samples taken while sandblasting portions of Laffey's hull showed no detectable plutonium. Using the ratio of plutonium to fission products to calculate the amount of plutonium present led to an estimate that a worker using a respirator would have to spend 100 million days of wet-sandblasting to inhale a dangerous amount of plutonium. From this came the conclusion that ships up to 100 times as contaminated as Laffey could be sandblasted without exposing shipyard personnel to a lung bazard. Filter samples collected during welding of contaminated saltwater lines also revealed no plutonium. Calculations using the plutonium-fission products tatio indicated an individual would need to weld for 1.000 days to accumulate a dangerous amount of plutonium in his body (Reference C.9.185, pp. 32 and 33). The findings of the laboratory assays appeared to show that nontarget ships of JTF 1 could be decontaminated and overhauled without radiological hazard to personnel, but, as discussed below, that work did not go forward immediately because of fears among the experts that hard-to-detect dangers were still present (Reference C.9.185, pp. 32 and 33).

#### The Question of Clearance Standards

About 2D September, the DSM left San Francisco for Washington, D.C., to present the findings from the decontamination experiments to higher authority. In Washington he prepared a directive setting forth the decontamination procedures established up to that point. Issued on 24 September as a joint BuShips-Buffed speedletter, it included authority and direction for decontamination of evaporators, heat-transfer apparatus (except condensers\*), hulls beneath the waterline, and ships' boats of all contaminated ships scheduled to remain in the active fleet. Members of each ship's crew were to clean the evaporators and heat-transfer apparatus as soon as practical. Hulls were to be cleaned below the waterline using standard wer soudblasting methods at the time of a ship's next scheduled drydock period. Debris from cleaning evaporators and heat-transfer devices and sand from sandblasting were to be kept wet until dumped at sea. Monitors were desirable but not essential for this work. Saltwater lines could be cut and welded without hazard, but sections removed were to be dumped at sea. All zinc plates used to retard electrolytic action were to be removed from main and auxiliary condensers and discarded at sea. Different rules were being developed to cover ships scheduled for disposal or deactiv vation (Reference C.9.187, pp. 16 and 19).

The DSM's directive was greeted with great enthusiasm by all commands concerned. The message from CJTF 1 on 9 September had led to fears that a great and indeterminant hazard to personnel was present. Now the hazard had been found to be minimal if the indicated safety precautions were taken. The methods to remove contamination were not too complicated, and regular maintenance could proceed more or less on schedule. BuShips representatives taking part in the work at San Prancisco visited the 11th, 13th, and 14th Naval Districts at San Diego. Seattle. and Pearl Harbor, respectively, to brief shipyard management

<sup>\*</sup> A condenser is a low-pressure heat-transfer device for changing steam to water in a propulsion or similiar closed-cycle system. It should not be confused with the evaporators used to distill freshwater.

on the decontamination procedures (Reference C.9.185, p. 36). Meanwhile, a vigorous program of decontamination experiments went on at the San Prancisco Naval Shipyard in an effort to develop better methods.

However, considerable uncertainty persisted about whether the 0.1 R/24 hours standard, as measured with a Geiger counter or similiar device, could be used for determining when a vessel required decontamination and when it could be considered safe and given clearance. No reliable instrument was available for determining the presence or absence of alpha contamination in the field. Analyses of the samples taken from Laffey, Whiting, Henrico, and Mount McKinley had provided an approximate ratio of plutonium to fission products, but no radsafe expert of recognized reputation was ready to declare that a Geiger reading of 0.1 R/24 hours or less assured protection from the total alpha hazard, that is, from plutonium or any other alpha emitters (Reference C.9.185, p. 41).

Consequently, BuShips called a conference in San Francisco on i October to grapple with the problem. The decision was made to study contamination of USS Rockoridge (APA-228). At that time it was considered the most beavily contaminated ship to arrive in the area, and it was of a size and type judged suitable for a detailed study of wide implications. The hope was not only to improve the accuracy of the plutonium ratio, but particularly to determine the total amount of plutonium on the ship. The figure could then be used as the basis for the needed standards. Numerous samples were taken from the ship and sent to the University of California for analysis, but the University's facilities for radiochemical analysis were sufficiently limited that weeks passed before the results were available (Reference C.9.185, pp. 41, 45 and 46).

While awaiting the results of the Work on <u>Rockbridge</u>. BuShips in Washington. D.C.. on 10 October proposed a set of contamination limits. After discussions between naval and civilian radsafe experts on the west coast and BuShips and BuMed in Washington. the final clearance standard for all ships was set at 0.001 R/24 hours (gamma) from shielded sources and 0.005 R/24 hours (combined beta and gamma) from shielded sources and 0.005 R/24 hours (combined beta and gamma) from exposed surfaces, subject to change if required by new information. These limits required decontamination of almost all nontarget ships that spent more than one day in the Bikini Lagoon after BAKER (Reference C.9.185, p. 49). Twelve ships were found to be within radiological limits. These ships were associated with CROSSROADS, but either had never entered Bikini after Baker or had been in the lagoon following BAKER for 1 to 3 days. They were <u>USS Charles P. Cecil</u> (DD-835). <u>USS Libestone</u> (IX-158). <u>USS LST-871</u>. <u>USS LST-989</u>, <u>USS Albemarle</u> (AV-5). <u>USS Panamint</u> (AGC-13). <u>USS Appalachian</u> (AGC-1). <u>USS Blue Ridge</u> (AGC-2), <u>USS Forse</u> (00-882), <u>USS Turner</u> (DD-834). <u>USS</u> <u>Shangri-La</u> (CV-39), and <u>USS Bountiful</u> (AH-9).

Decontamination work on a large scale apparently started after 14 October. when BuShips authorized crews of all nontarget ships. including those scheduled for disposal and deactivation. immediately to go forward with acid cleaning of evaporators and of firefighting. flushing, cooling, and drainage systems. At least 55 nontarget ships that had arrived at one of the west coast naval districts were involved. CINCPAC and ComWestSeaFron were to see that the work was done. The final clearance limits recently agreed upon by BuShips and other interested parties were used, however, only as a temporary standard for "operational, conditional, or preliminary" clearance, pending the analysis and availability of <u>Rockbridge</u> data (Reference C.9.185, pp. 50 through 52).

Results of the assay of fission products and plutonium on <u>Rockbridge</u> were available on 25 October 1946 from the University of California. At the time of the collection of the samples, radsafe monitors reported the external hull readings were 0.009 to 0.010 R/24 hours (beta plus gamma). The total activity calculated to be present on <u>Rockbridge</u> was 376 millicuries of fission product activity and 2.020 milligrams of plutonium. This material was distributed inside 23.207 ft<sup>2</sup> (2.16 km<sup>2</sup>) of saltwater piping, inside 12.780 ft<sup>2</sup> (1.18 km<sup>2</sup>) of condenser and evaporator interiors, and the entire underwater hull. The hull contamipation when removed was contained in the 125 tons of sand used to Sandblast the external hull. Although about two tolerance doses of plutonium were detected, these and the fission products were spread over an extremely large area and in locations that greatly reduced the potential exposure to personnel (Reference C.11.18; Reference C.9.185, p. 56).

In addition to continuing uncertainty about final clearance standards, the decontamination regulations promulgated up to that time had two gaps: (1) how to determine contamination of a ship's bull without time-consuming and expensive drydocking, and (2) how to remove contamination from condensets. At that point BuMed appointed a special medical board to advise the Navy's Surgeon General, who was Chief of BuMed, on radiological matters presented to it for study. It was chaited by the Medical Officer dispatched to San Francisco in late August by CJTF 1 and included the Radsafe Advisor to CJTF 1 and radiation experts from the University of California (Reference C.9.185, p. 54).

The medical board held its first general meeting on 4 November to consider results of analysis of <u>Rockbridge</u> samples. After much discussion, the members of the board suggested a set of final clearance standards, but these were not acceptable either to Bulled or BuShips. BuShips sent a representative to the west coast, and after consultation with the BuShips representative and additional study, the board proposed a new set of final radiological clearance standards as follows (Reference C.9.185, p. 56):

- Habitually closed saltwater systems were not to have exterior readings exceeding:
  - 0.001 R/24 hours (gamma) for 94 percent of the system.
  - b. 0.005 R/24 hours (gamma) for 5 percent of the system.
  - c. 0.01 R/24 hours (gamma) for 1 percent of the system.
- Open systems were not to exceed an average of 0.001 R/24 hours (gamma) and 0.005 R/24 hours (gamma plus beta)
- Underwater portions of the hull exposed by listing and triaming were not to exceed an average of 0.02 R/24 hours (gamma plus beta) wat or dry.

BuShips accepted these standards for final clearance. For operational or preliminary clearance, the bureau took the standards the board had originally set for active ships, namely (Reference C.9.165, pp. 54 and 55):

- 1. For shielded systems -- 0.01 R/24 hours (gamma)
- For unshielded systems and surfaces 0.05 R/24 hours (gamma plus beta)
- For underwater body -- 0.05 R/24 hours (gamma plus beta).

During the development of clearance standards, work had continued at the San Francisco Naval Shipyard on removing radioactivity from condensers and satisfactory methods had been worked out.

Clearance Standards Adopted

On 22 November, Bulled, and BuShips jointly issued a letter giving agreed upon decontamination methods and clearance standards (Reference C.9.187, pp. 30 through 51), which superseded all previous directives (Reference C.9.185, pp. 57 and 58).

The criteria for clearance are:

- (1) The existence of any areas of radioactivity with readings in excess of 0.1r (gamma) or 0.5r (beta) combined will be considered as above safety tolerance for external radiation and will be immediately decontaminated or disposed of, and there will be taken such other precautions as are required to insure safety of personnel. Serious radioactive hazard, not involving external radiation, will exist in enclosed salt water systems which give a reading of 0.1r (gamma) through the metal of the system. All areas of contamination within closed saltwater systems with readings between 0.1 and 0.01 gamma on external reading will be decontaminated immediately.
- (2) <u>Operational Clearance</u> MAY is granted for urgent reasons, when readings are:
  - (a) Maximum, shie)ded, between 0.1 and 0.001r gamma.
  - (b) Maximum, unshielded, between 0.5 and 0.005r beta gamma combined except underwater bodies with surface readings having statistical averages between 0.5 and 0.02 beta gamma combined.

Operational Clearance WILL be granted when readings are:

- (a) Maximum, shielded, between 0.01 and 0.001r gamma
- (b) Maximum, unshielded, between 0.05 and 0.005c gamma beta combined except bulls of external surface readings having statistical averages between 0.05 and 0.02 R beta gamma combined.
- (3) Final Clearance will be granted when readings are:
  - (a) Maximum, shielded, not above 0.001r gamma
  - (b) Maximum, unshielded, not above 0.005r gamma beta combined.

Exception (a) Underwater body, readings statistically averaged not above 0.02r beta gamma combined and with no single localized area in excess of 0.1r beta gamma combined

Exception (b) salt water systems having external readings ninety-four (94) per cent of which are not above 0.001r gamma. five (5) per cent not above 0.005r (gamma) and, one (1) per cent not above 0.01r gamma.

The letter also stated:

All of the ships involved (target vessels not included) have low radiation intensities and small amounts of contaminating materials. They present no danger from external radiation. Any danger to personnel which may exist involves the introduction of contaminating toxic materials into the body . . . . Considering the relatively small quantities of toxic material present in any one ship and the great amount of gross material with which it is mixed (marine growth, scale, cust) and the quantities of this gross material necessary to gain access to the body in order to produce physical injury due to radioactive effects it is NOT LIKELY that personnel engaged in routine operations or maintenance of these vessels will suffer injury. It is CERTAIN they will not suffer injury if the precautions directed are followed, and the established clearance procedures complied with. The Bureau of Medicine and Surgery has established certain tolerance limits on the basis of recommendations made by an advisory board of experts in this field of toxicology. These are in conformity with nationally accepted standards for safety in regard to external radiation and to radioactive hazards within the body.

On 27 November at a conference on radiological safety convened by Buships in Washington D.C., a University of California scientist speaking to the question of dangers from scraping CROSSROADS nontarget ships took much the same position. He stated that much authoritative information indicated the insoluble form of plutonium used in nuclear weapons was not absorbed in the digestive tract or the lungs unless quantities as large as a gram were present. He argued that the health hazards from long-lived fission products, such as strontium and cesium, were far greater than from plutonium. The amount of such fission products would be on the order of 50 millicuries in many tons of scrap. This quantity of radioactive material was equivalent to the amount of radium found in ordinary rock. Therefore, he was willing to state positively that there was absolutely no possibility of physical injury from the amounts of radioactive material present on the nontarget ships (Reference C.9.187, pp. 112 and 113).

On 18 December, results from tests at the University of California indicated that decay rates of gamma emitters were much greater than had been realized. This led to some revision of the clearance instructions, and a reestimation that all nontarget ships would receive final clearance by 15 March 1947 (Reference C.9.185, pp. 60 and 61).

## Activities at Other Shipyards.

In order to avoid overtaining the facilities at San Francisco. ComServPac. CJTF 1, and CNO issued orders that established decontamination and clearance centers at San Francisco. Pearl Harbor. Guam, and other selected shipyards (Reference C.9.185, p. 22). This culminated in the ultimate dispersal of ships to the various shipyards as follows (target ships are noted with an asterisk (Reference C.13.3):

# SAN FRANCISCO

USS Achomawi (ATF-148)	USS Henrico (APA-45)
OSS Appalachian (AGC-1)	*USS Independence (CVL-22)
USS Appling (APA-58)	<u>USS James M. Cillis</u> (ACS-13)
USS Artemis (AKA-21)	USS John Blish (ACS-10)
ATR -40	USS Laffey (DD-724)
ATA-187	*LCI(L) 549
ATA -192	*LCI(L)-615
USS Avery Island (AG-76)	USS Lowry (00-770)
<u>USS Barton</u> (DD-722)	USS LST-338
USS Benevolence (AH-13)	<u>uss lst-817</u>
* <u>USS_Bladen</u> (APA-63)	<u>USS LST-861</u>
<u>USS Bottineau</u> (APA-235)	USS LST-071
USS Bowditch (AGS-4)	<u>USS LST-881</u>
USS Cebu (ARG 6)	<u>USS 15T-989</u>
<u>USS Chickasaw</u> (ATF-83)	USS Moale (OD-693)
" <u>USS</u> Conyngham (DD-371)	USS Munsee (ATF-107)
M <u>USS Cor</u> tla <u>nd</u> (APA-75)	<sup>4</sup> USS Niagara (APA-87)
* <u>USS_Crittenden</u> (APA-77)	<u>USS_0'Brien</u> (DD-725)
<u>USS Deliver</u> (ARS-23)	USS_Palmyra (ARS[T]-3)
<u>USS Dixie</u> (AD-14)	USS Rockbridge (APA-228)
<u>USS Enoree</u> (AO-69)	<u>OSS Rocki</u> ngh <u>am</u> (APA-229)
• <u>USS Filimore</u> (APA-83)	USS Rockwall (APA-230)
<u>USS Gascona</u> de (APA-85)	<u>OSS San Marços</u> (LSD-25)
*USS_Geneva (APA-86)	<u>DS\$ Walke</u> (DD-723)
	<u>US</u> S ⊎idgeon (ASR-1)

# MARE ISLAND

* <u>USS_Dentuda</u> (SS-335)	*V <u>SS_Skate</u> (55~305)
USS Fulton (AS-11)	* <u>USS_Skipjack</u> (SS-199)
* <u>USS P</u> arche (SS-3 <b>84</b> )	* <u>USS_</u> Ťu <u>na</u> (SS-203)
* <u>USS S</u> eara <u>ven</u> (SS-196)	

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# PEARL HARBOR

ARD-29	* <u>US5 New York</u> (BB-34)
USCG Bramble (WAGL-392)	<u>USS Oneota</u> (AN-85)
USS Chowanoc (ATF-100)	<u>USS Orca</u> (AVP-49)
USS Current (ARS-22)	<u>USS</u> Ott <u>owa</u> (AKA 101)
<u>USS flusse</u> r (DD-368)	PGM-23
USS Hesperia (AKA-13)	PCM-24
LC1(L)-1052	PGM-31
* <u>USS Nevada</u> (BB-36)	<u>USS Shakamaxon</u> (AN-88)

# PUGET SOUND

<u>USS Allen M.</u> S <u>umper</u> (DD-692)	USS Robert K. Huntington (DD 781)
ATR -87	*USS Pensacola (CA-24)
ATA-124	USS Pollux (AKS-4)
ATA-180	<u>US8 Quartz</u> (IX-150)
USS Bayfleld (APA-33)	"DSS Salt Lake <u>City</u> (CA-25)
<u>USS_Chikaskia</u> (A0-54)	USS Suncock (AN-80)
USS Etlah (AN-79)	USS Wharton (AP-7)
<u>USS Ingraham</u> (DD-654)	USS Wildcat (AW-2)
*U <u>SS Hughe</u> s (DD-410)	

GUAN, MARIANAS

LCI(L)-977	LCT 1184	YF -990
LCI(L)-1067	LCT-1341	Y <b>H</b> S-354
LCI(L)-1091	LCT-1361	YM9-358
LCT-1130	LCT-1377	YMS-413
LCT-1355	LCT-1420	YMS 463
	LCT-1461	¥0-132

# SAN DIEGO

USS Alax (AR-6) ATA-185 USS Begor (APD-127) USS Bexar (APA-237) USS Coucal (ASR-8) USS George Clymer (APA-27) USS Mount McKinley (AGC-7) USS Newman K. Perry (DD-883) USS Rolette (AKA-99) USS Saidor (CVE-117) USS Saint Croix (APA-231)

# LOS ANGELES

USS Albemarle (AV-5)USS Blue Ridge (AGC-2)USS Clamp (ARS-33)USS Coasters Harbor (AC-74)USS Creon (ARL-11)USS Cumberland Sound (AV-17)USS Dutton (ACS-8)USS Fall River (CA-131)USS Furse (DD-862)USS Gunston Hall (LSD-5)USS Kenneth Whiting (AV-14)

USS Mender (ARS0-2) USS Panamine (AGC-13) USS Phaon (ARB-3) USS Preserver (ARS-0) USS Presque Isle (APB-44) USS Presque Isle (APB-44) USS Reclaimer (ARS-42) USS Severn (AO-61) USS Stoux (ATF-75) USS Sphinx (ARL-24) USS Telamon (ARB-0) USS Tombigbee (AOG-11)

### KWAJALEIN

APL-27

#### PHIL1PPINES

# PGH-32

#### NORFOLK, VIRGENTA

# USS Burleson (APA 67)

# NEW ORLEANS, LOUISIANA

# FGM-25

# EK7H-29

Information is lacking on decontamination procedures used at shipyards other than San Fransisco. San Francisco was, however, the center of research and expertise on the problem and decontamination is considered to have been standard at all naval yards. Moreover, warnings and instructions flowed at a fairly brisk rate from CJTF 1, HuMed, and BuShips. In dealing with such a new and unfamiliar problem, responsible officials at other shipyards had little to depend on except the procedures developed at San Francisco and ordered by central naval authorities.

By 1 January 1947, 80 nontarget ships had been granted final radiological clearance (Reference C.9.185, p. 59). On 28 February, the status of nontarget ship clearance was as follows (Reference C.0.1, p. 3):

Ships with final clearance, including 12 not exposed						128
Ships with operational clearance and tecommended for final clearance						4
Ships with operational clearance but requiring more work for final clearance						3
Ships without either clearance		•	•			22
Nontarget ships destroyed since BAKER .						2

Disposal of Sand and Acid Used in Decontamination.

Cleaning ships' hulls using wet sandblasting and cleaning saltwater piping using various acid solution began early in the effort to decontaminate nontarget CROSSROADS vessels. Until 4 December 1946, the sand and acid solution used in decontamination was segregated and disposed of at sea.

The problem of disposal was discussed at the Washington BuShips conference on 27 November. The conference concluded that (Reference C.9.187, pp. 108 and 109):

- Special disposal of sand used in sandblasting underwater bodies of radioactively contaminated nontarget ships is not required, provided marine growth is removed first and disposed of.
- Solutions used in removal of radioactivity from saltwater systems of nontarget ships may be discharged into harbors. preferably at a slow rate or after dilution. withoutsecurity or health hazard.

Based on experience at the San Francisc Naval Shipyard and the discussion at the conference, CJTF L issued a message on 4 December stating, in part, that (Reference C.9.187, p. 53):

- Special disposal of sand used in wet sandblasting of underwater bodies of CROSSROADS nontarget vessels is not required.
- Marine growth and scale removed from vessels at first drydocking shall be segregated and sunk at sea as previously prescribed.

- 3. Acid and other decontaminating solutions used in cleaning saitwater systems may be discharged into the harbor. Solutions should be discharged at slow rate or by providing a flow of water along with the discharge so as to dilute the solution by about one-fourth. Discharge should be made well clear of docks and shorelines during ebb tide.
- Scales and marine growth removed manually from evaporators and saltwater systems shall be segregated and suck at sea.

Of the approximately 54 ships decontaminated at San francisco only 9 were decontaminated after 4 December. In a 1982 letter from the U.S. Navy to the mayor of San Francisco regarding her concern of radiation contamination of San Francisco Bay, the issue was readdressed (Reference C.13.3):

Records of the quantities of radioactive fission products which were discharged into San Francisco Bay could not be located. As a result of the Navy's current review, it is estimated that a maximum of 1 curie of fission products of the most highly contaminated ship could have been disposed of in this manner. It is concluded that the total quantity of fission products which could have been disposed of in San Francisco Bay as a result of all nine ships decontaminated after 4 December 1946, could also be discharged today from a commercial nuclear facility and meet the requirements of the Nuclear Regulatory Commission.

The procedures used in 1946 to dispose of sand and acid solutions produced no greater concentrations of radioactivity than are currently acceptable from commercial nuclear reactor operations.

# CHAPTER & BIX[N] SCIENTIFIC RESURVEY

# BACKGROUND

Following the conclusion of Operation CROSSROADS, the Joint CROSSROADS Committee gave preliminary consideration to the possibility of a Rikini Scientific Resurvey. Members of the Joint Committee carried out feasibility assessments and consulted with scientists from Joint Task Force 1 on potential studies and the logistics support that would be required for the operation. A subcommittee was formed to analyze proposed operational details and make recommendations (Reference C.B.1, p. 1).

Acting in response to recommendations from the Joint CROSSROADS Committee, on 16 May 1947 the Joint Chiefs of Staff (JCS) issued a memorandum to the Secretary of the Navy requesting that the Joint CROSSROADS Committee and its successor organization, the Armed Forces Special Weapons Project, undertake technical supervision of the Bikini Scientific Resurvey. The operation was to be conducted by the Navy in cooperation with the War Department and with the participation of the U.S. Geological Survey, the Fish and Wildlife Service of the Department of Interior, and the Smithsonian Institution. A target date of 15 July 1947 was proposed (Reference C.B.1, p. 75).

The objectives of the Bikini Scientific Resurvey, as formulated by JCS. were to (Reference C.8.1, p. 75):

- Collect biological samples
- Carry out diving operations to recover instrumentation from target ships and conduct structural examinations of these vessels
- Collect water, bottom samples, and cores.
- Conduct radiological studies of the lagoon. Surrounding islands, and organisms, with particular emphasis on the analysis of hazards from alpha radiation and from possibly contaminated food organisms.

Following the issuance of the JCS memorandum, the Joint CROSSROADS Committee immediately began to prepare for the operation. Building on the guidance contained in this memorandum. a number of specific scientific objectives were established (Reference C.S.L. p. 3):

 Analysis of the amount and nature of radioactivity remaining in the lagoon water and on the reef and land structure of the atoll wherever it exceeded normal background levels of radioactivity. Particular attention was to be given to the portion of the reef between Aomen and Bikini islands at a stage of tide as close as possible to that which existed 15 minutes after Test BAKER. These investigations would include charting the exposed portion of the reef through aerial photography.

- Examination of the concentration and kinds of radioactive materials found in plants and animals in the area and assessment of the effects the radioactivity had on these organisms
- Physiological. geological. and oceanographic studies of organisms and reef-building processes. including the drilling of cores down to 1,000 and perhaps 2,500 feet (305 and 762 meters)
- Detailed observation (including photographic recording) of target ships sunk as a result of Test BAKER, with special attention to be given to <u>USS Saratoga</u> (CV-3), <u>Nagato</u> (captured Japanese battleship), <u>USS Pilotfish</u> (SS-386), <u>USS Apogon</u> (SS-308), and perhaps <u>USS Arkansas</u> (WB-33) and <u>USS Gilliam</u> (APA-57) if time permitted, Detailed structural inspections were to be made to determine the exact cause of sinking and to identify minor structural failures.
- Recovery of four instruments from <u>Nagato</u> -- one ionization gauge. two linear time-pressure recorders. and one diaphragm-type damage gauge. Since these instruments were watertight they would be in good condition and yield recordings of considerable value.
- Attempt to locate a section of LSM-60, believed to have been identified in photographs and to inspect this section for type of rupture, heat effects, and radioactivity.

## TASK GROUP 10.12

In a directive issued on 2 June 1947, the Chief of Naval Operations (CNO) ordered that the Bikini Scientific Resurvey be carried out under the operational control of the Commander-in-Chief, Pacific Fleet (CINCPACELT). On 3 June 1947, CNO sent a dispatch to CINCPACELT designating three ships for participation in the operation:

- USS Chilton (APA-38) (flagship)
- USS Coucal (ASR-8)
- LCI(L)-615.

The same message ordered <u>Chilton</u> to depart San Diego on 1 July for Bikini Atoll via Pear) Rarbor (Reference C.B.I, p. 6). On 12 June CINCPACELT designated a commander for the task group (PG 10.12) that would conduct the Bikini Scientific Resulvey. CINCPACELT Operation Order No. 101-47 dated 29 June 1947 (Reference C.S.I. p. 6) detailed the task group's organization.

Commander Task Group (CTG) 10.12 was a Navy captain who had a subordinate Navy officer for a technical director and a staft of 36. One Navy Medical Corps officer on the staff was assigned as Radiological Health Officer and seven officers were assigned duties involving radiological safety (Reference C.8.). pp. 6 through 9). In addition, one individual from Scripps Institution of Oceanography was assigned to the radiological safety (radsafe) group as a radiological monitor and three pharmacist's mates were assigned to assist the Radiological Health Officer (Reference C.8.1, p. 13).

Navy Construction Battalian Detachment 1800, consisting of 1 officer and 36 enlisted personnel, was assigned to TG 10.12 to provide engineering support for the resurvey. This unit also operated one amphibian aircraft in support of the operation (Reference C.8.1, p. 6).

The X-Ray Division, commanded by one of the staff officers of TG 10.12, was formed to provide technical support to the resurvey scientific teams. This unit contained 183 Navy enlisted personnel (Reference C.8.1, p. 8).

Primarily for reporting results and findings of the investigations. A scientific group organization was set up. drawing from the military. c)villan government employees, and civilian contractor personnel assigned to TG 10.12 (Reference C.8.1, pp. 8 through 14). This organization had ten divisions as listed below (number of personnel shown in parentheses):

- Geology
  - Island and Reef Geology (5)
  - Submarine Geology (2)
    - Contractor Support Team (8)
- Radioblology -- (11)
- Fisheries
  - -- Reef and Lagoon Fishes (4)
  - Pelagic Fishes (6)
  - -- Population and Taxonomic Studies (1)
- Biology
  - Experimental Biology (6)
  - Beology and Morphology (3)
- Radiochemistry and Radiophysics
  - -- Fission Products Chemistry (5)
  - -- Plutonium Chemistry (3)
  - -- Soils Chemistry (1)
  - Radiophysics (2)
- Radiological Safety (8 personnel -- 7 were TG 10.12 staff officers)
- Radiological Health (4 personnel drawn from the TG 10.12 staff)

- Diving. Underwater Photgraphy and Television (6)
- Atmy Engineers (2)
- Aerology (Weather Observation) (1 person from the TG 10.12 staff).

The Members of the scientific and military groups came from a large number of organizations -- the Navy (including officers taken from the TC 10.12 staff), the War Department, and (Reference C.8.1, p. 8):

- Atomic Energy Commission
- Clinton Laboratories
- Colorado School of Mines
- Columbia University
- Cornell Aeronautical Laboratory
- Department of Interior Fish and Wildlife Service.
- Hanford Engineering Works
- International Pacific Fisheries Halibur Commission
- Ohio State University
- Scripps Institution of Oceanography
- Stanford University (including Stanford Research Institute and Hopkins Marine Station)
- B.S. Geological Survey
- U.S. National Nuseum, Smithsonian Institute
- University of Hawali
- University of Minnesota
- University of Tennessee
- University of Washington
- Washington State Department of Came.

# PREPARATIONS

Relatively little preparation time was available between the CNO order of 2 June 1947 directing that the Bikini Scientific Resurvey be undertaken and initiation of onsite operations in July 1947 (Reference C.8.1, p. 20).

<u>Chilton</u>, which was to serve as the task group's flagship, had been recently overhauled. The first members of the resurvey team boarded <u>Chilton</u> in San Diego on 17 June 1947. Construction of laboratory facilities was started immediately. Stores were loaded between 23 June 1947 and when the ship departed on 1 July 1947 (Reference C.8.1, p. 17).

<u>Chilton</u> arrived at Pearl Harbor on 7 July. Additional personnel and supplies were taken aboard and <u>Chilton</u> departed Pearl Harbor en route Bikini on 8 July (Reference C.8.). p. 17).

<u>Coucal</u> departed Pearl Harbor on route Bikini on 7 July 1947. LC1(L)-6)5 loaded supplies at Kwajalein and arrived on station at Bikini on 17 July (Reference C.8.1. p. 17).

An operation plan was prepared while <u>Chilton</u> was an route from San Diego to Pearl Harbor. This plan generally restated the objectives outlined in the JCS memorandum.

Various annexes of the operation plan covered the operational, scientific, and radsafe aspects of the mission.

The plan (Reference C.8.1. pp. 23 and 24) detailed the procedures to be followed to ensure radiological safety, including the initial radiological reconnaissance of Bikini Atoll. Appendix I of Annex J of the Operation Plan (reproduced in Appendix B) contains these sections:

- Radiological hazards were defined and estimated for the Bikini area.
- Provision was made for special pre- and postoperational medical examinations.
- Provision for the issue of special clothing for personnel working in contaminated areas was made.
- Regulations covering shore operations were established. Restrictions were placed on eating foods and drinking water from the islands, swimming in the area was prohibited (these restrictions subsequently were lifted), and provision made for a radsafe officer to accompany all initial trips to onshore areas.
- Radsafe equipment was specified;
  - -- Type 263 Geiger tube survey meters would be used to detect beta and gamma radiation in the field
  - Portable "Zeuto" nylon window ionization chambers would be employed to detect heavy alpha radiation
  - -- Type 235 survey meters with ionization chambers in an extended probe would be used for gamma radiation monitoring on sunken ships
  - As dictated by circumstances, pencil-type quartz fiber dosimeters for detection of gamma radiation would be employed by divers and other personnel.
- Provisions were made for the establishment of a photographic dosimetry unit to process film badges.
- All divers and other personnel expected to encounter significant radiation would wear Type X film badges, and an individual would not be allowed to reengage in the same

activity if his total body radiation exceeded 0.3 R/24 hours the previous day.

- Plans were made for the establishment of decontamination stations and decontamination techniques were outlined.
- Rules governing the handling of radiologically active scientific specimens, the conduct of laboratory work, and disposal of laboratory waste were established.
- Procedures for reentry into Bikini Atoil and for offloading of equipment (presupposing favorable results from the initial radiological reconnaissance) were established.

Additional technical support for radsale operations was available from the two radiochemistry laboratories and the counter room established on <u>Chilton</u> (Reference C.B.I. pp. 27 through 29).

Daily staff conferences were held during the trip to Bikini Atoli. During these meetings, detailed plans and procedures for the implementation of the operation plan were developed (Reference C.8.1, p. 27). A Scientific Advisory Board was established on 2 July 1947. This board provided advice to the project officer on administrative matters, particularly allocation of laboratory space and facilities and implementation of the scientific work program (Reference C.8.1, p. 33).

On the recommendation of the Scientific Advisory Board, a series of seminars was conducted. The purpose of these seminars was to provide scientific personnel with information concerning the background, objectives, and methodologies of the studies to be conducted during the Bikini Scientific Resurvey. Three of the ten seminars in the series covered topics pertaining to radiological safety (Reference C.B.), pp. 33 through 41). The first. "Effects of Radiation on Man." summarized what was known in this field and identified potential hazards on Bikini Atoli. The remaining two seminars outlined the operation plan for tadiological safety at Bikini (Reference C.B.I. pp. 39 and 40).

While <u>Chilton</u> was en route from Pearl Harbor to Bikini Atoll, several series of experiments bearing on radiological safety were conducted. In one group of tests, samples of seawater wore analyzed for radioactive content to establish a background figure (or comparison with the lagoon water at Bikini Atoll. In a separate test, a container of radium was bidden on board <u>Chilton</u> and monitors with Geiget counters attempted to identify its location. The monitors detected not only the radium container but also x-ray equipment in the dental office. The purpose of this test was to ensure that the Geiger counters were in good operating condition before two initial landing at Bikini Atoll (Reference C.8.1, p. 44).

During the trip to Bikini Atoll. work proceeded on the scientific laboratories. As a consequence, by 15 July 1947 all of the programmed onboard laboratories were ready for use. These facilities included (Reference C.8.1, p. 29):

> Two radiochemistry laboratories and a counting room aboard <u>Chilton</u> that were capable of determining beta, gamma, and alpha radiation levels in samples

- A radiobiology laboratory (aboard Chilton)
- A photography laboratory to support scientific operations, which had an associated activity devoted to photographic dosimetry, including the processing and examination of film badges aboard Chilton.

Subsequently, other laboratories were established on Rikini Island to support the scientific activities of anshore research personnel.

Medical examinations were the final preoperational component of the radsafe program. All TG 10.12 military and civilian personnel who were to be engaged in the resurvey operations were required to complete a special physical examination and detailed laboratory tests. Later, personnel who had been actively engaged in resurvey activities were reexamined following the operation. Appendix E of the operation plan detailed the medical tests and criteria employed (Reference C.8.1, p. 100).

#### OPERATIONS.

Initial landing operations commenced on 15 July 1947. <u>Coucal</u> and <u>Chilton</u> passed through Encu Channel at 1030. <u>Coucal</u> anchored in the vicinity of the sunken <u>Saratoga</u>; <u>Chilton</u> anchored off Bikini Island (Reference C.8.1, p. 47).

At 1145 a radiological monitoring team landed on Bikini Island to monitor the beach, being the first party ashore. Radsafe officers obtained bera and gamma readings along the beach and at a number of inland locations. Readings inland from the beach were uniformly at the same general levels as normal background. The lagoon side of the beach area had radioactivity concentrated in old life rafts, fenders, and similar materials. It was believed that these items might have washed ashore from target ships sunk during CROSSROADS, Samples were obtained from all areas and returned to <u>Chilton</u> for alpha counts (Reference C.8.1, p. 47 through 51).

All members of the initial landing party were required to wear long-sleeved shirts, full-length trousers, and heavy work shoes. On return to <u>Chilton</u> they were monitored to assure necessary decontamination of personnel (a change station was established for this purpose) and prevent ship contamination. All personnel wore film badges designed to record both beta and gamma tadiation and monitors carried pocket dosimeters (Reference C.8.1, p. 51).

Evaluation of the pocket dosimeters and examination of developed film badges indicated that no individuals in the landing party had been exposed to tolerance levels of beta or gamma radiation (Reference C.8.1, p. 51).

Immediately after the initial landing, a second landing team went ashore on Eneman Island where monitoring operations were also carried out (Reference C.S.L. p. 51).

Evidence collected by these two landing parties indicated that landing operations could be safely conducted.

Based on the results of the initial surveys, the Radiological Health Officet reported in a memorandum dated 16 July 1947 (reproduced in: Appendix B) that (Reference C.8.1. p. 119):

- The preliminary survey of Bikini Island indicated that radiation intensities were on the order of 0.004 k/24 hours and were well below the established tolerance levels.
- Reconnaissance of Bikini Island indicated that all of the low-intensity cadlation encountered in the central sector of the Island was confined to the sand beaches along the lagoon side of the Island and to debtis that had washed up on the beaches.
- The survey of the northwestern tip of the island indicated intensities of approximately 0.03 R/24 hours in algal beds and other scattered locations in that sector. In the remainder of the surveyed areas, only background counts were observed.
- Observed intensities on Eneman Island were not above background, with the exception of scattered pieces of debris that produced readings somewhat above background count.

As soon as the radiological safety of various areas on Bikini Island was assured, offloading of material from <u>Chilton</u> commenced. Working on a dawn-todark schedule between 15 July 1947 and 22 July 1947, the offloading schedule specified in Annex K of the operation plan was met (Reference C.8.1, pp. 53 and 54).

Scientific activity commenced on 16 July. On 17 July. diving operations from <u>Coucal</u> were initiated. The initial target was <u>Saratoga</u>, which had been sunk by shot RAKER almost a year before. On the same day, LCI(L)-615 arrived with additional supplies. This vessel was used to support submarine geology studies. On July 18. drilling operations commenced (Reference C.8.1. p. 54).

Radsafe officers accompanied all scientific working parties during the initial landings on islands and reef areas and continued to accompany these groups over the period 15 July to 28 August 1947 until it had been determined that the specific areas to be visited were free from contamination by radioactive materials (Reference C.8.2, p. 94).

Victoreen Model 263 survey meters were used in all field and personnel monitoring operations. These devices were capable of detecting both gamma and beta-plus-gamma radiation through the approximate range of 0.001 to 0.6 R/24 hours. Model 356 alpha meters were also included in the equipment of the Radio-logical Safety Section but proved to be of no value in general terrain monitoring and of only limited value in the monitoring of underwater samples because of their comparatively low sensitivity (Reference C.8.2, p. 94).

While no major problems were encountered with the Victoreen Model 263 survey meters, these devices were a continuous repair and maintenance problem. They also proved to be too heavy and cumbersome to transport by hand over long distances. Hence, web straps were improvised. Canvas cases were also improvised to protect the meters from water damage during rubber boat landings (Reference C.8.2, p. 95).

Between 15 July and 28 August, two members of the Radiological Safety Section were assigned to <u>Coucal</u> on a full-time basis. Duries included monitoring of divers, diving dress, and associated gear immediately following roturn aboard the ship after a dive: preliminary monitoring of all samples brought to the surface by the divers; and periodic monitoring of the ship itself to ensure that no unnecessary accumulation of radioactive materials occurred (Reference C.8.2, p. 95).

Two types of underwater survey meters/probes were tested during deep-water diving operations conducted from Coucal (Reference C.8.2. p. 94).

The initial equipment set consisted of a brass-cased Geiger tube, approximately 120 feet (37.6 meters) of shielded extension cable, and a Victoreen Nodel X-325 counting rate meter. Tests conducted before the initial dive on  $\frac{3}{4}$  showed that this equipment was inadequate because the survey cable was too short to survey the bottom in the vicinity of the target ship's position. Hence, the probe could not be used throughout the target area (Reference C.8.2, p. 94).

On 28 July. an experimental underwater radiological survey meter probe was received aboard <u>Chilton</u> from the Naval Research Laboratory. It consisted of a brass cylinder containing seven Geiger tubes, electrical circuitry and recording meters, and 225 feet (69 meters) of shielded extension cable. This device had a sensitivity range between (approximately) 0.00005 and 0.005 R/24 hours for gamma radiation only. Limited tests of this equipment were made during the latter part of August (Reference C.8.2, pp. 94 and 95).

Both probes were of limited utility because of their high sensitivities and because they required alternating current (Reference C.8.2, p. 95).

in addition to radiological reconnaissance, one of the missions of the original landing parties was to search for signs of human activity on Bikini following the conclusion of CROSSROADS. During both the initial survey and subsequent operations, no indications of human occupation before the arrival of the resurvey team were found (Reference C.B.I, p. 59).

The operation plan prohibited the consumption of fish. Fruits or other materials grown in or around Bikini Lagoon, the drinking of water from any island source, and swimming. On 19 July CTG 10.12 opened limited recreation areas on Bikini Island. Certain beach areas were opened to swimming on 21 July, and the ban on consumption of edible fruits was lifted on 24 July. The prohibition of the consumption of fish and other marine organisms remained in effect and all personnel were cautioned to avoid unnecessary contact with barges and other objects in Bikini Lagoon and with the debris found on the beaches. CTG 10.12 initiated these actions on the advice of the Radiological Health Advisory Board established by Annex J of the operation plan (Reference C.8.1. p. 59: Reference C.8.2. p. 95). This annex is reproduced in Appendix B.

After it had been determined that the general level of radiation throughout Bikini Atoll was well within the tolerance limit of D.J R/24 hours, all members of the Radiological Safety Section, except the radsafe officer and the two officers assigned to Coucal, were assigned collateral duties as planning officers for the major scientific groups of the resurvey staff. These reassigned officers continued to be primarily responsible for monitoring and for protecting personnel from radiation. One officer served as both radsafe officer and planning officer for LCI(L)-615 throughout the period of bottom sampling and coring operations. Another officer acted in the same capacity during shallow diving operations conducted from an LCM (Reference C.8.7, p. 95).

Monitoring data were collected by radsafe officers accompanying scientific teams and by independent radiological recontaissance teams between 15 July and 28 August from all of the major islands and from representative islands in each group except the sector at the western end of Bikini Lagoon (Bokdrolu). Bokaetoktok, and Oroken islands). A complete recontaissance of the latter islands was regarded as unnecessary because of their distance from the anchorage of Chilton and their lack of significance for the resurvey operation (Reference C.B.2, p. 96).

The survey indicated that while certain isolated areas and accumulations of waterborne debris found on the lagoon beaches continued to produce beta and gamma radiation in excess of the established tolerance limit of 0.1 R/24 hours, the general level of beta and gamma radiation throughout the atoli was well below this limit. Debris along the beach that continued to produce radiation was almost entirely material that was assumed to have been blown overboard from target ships during CROSSROADS or thrown into the lagoon by reboarding and damage control teams following BAKER (Reference C.8.2, p. 96).

On 25 July, CTG 10.12 forwarded two requests to CINCPACELT, asking that LCI(L)-615 be retained for the duration of the resurvey and that an LSM be assigned for use in resurvey operations and for the transport of scientific specimens to San Diego. On 30 July, Commander Service Force, Pacific, ordered LSM-382 to report to CTG 10.12 as soon as practicable. LSM-382 reported to Bikini Lagoon on 5 August (Reference C.B.1, pp. 59 through 61).

On 1) August. LSM-382 with a number of scientific staff members on board visited Rongerik Atoll. This radiologically uncontaminated atoll was studied to obtain comparative data for the Bikini analyses (Reference C.8.1, p. 52).

## OTHER UNITS AND PERSONNEL

Other personnel and units, not formally or originally assigned to TG 10.12, visited Bikini during the resurvey.

The first of these contacts occurred on 15 and 16 July when two Navy Cataline (2BY) aircraft flew up from Kwajalein. The Atoli Commander. Kwajalein, arrived to confer with CNG 10.12 on 16 July. Courier aircraft operated on the Kwajalein-Bikini route throughout the operation (Reference C.8.1, p. 51).

On 28 July <u>USS Latona</u> (AF-35) arrived in Bikini Lagoon. It transferred supplies to <u>Chilton</u> and departed the same day (Reference C.8.1, p. 59).

Between 31 July and 2 August, three technical specialists from Cornell Aeronautical Laboratory joined the resurvey to assist in the installation and operation of underwater television equipment (Reference C.8.1, p. 59).

From 6 to 8 August, a representative from the Office of the Secretary of the Navy acrived via courier plane. He visited the sites ashore at which resurvey operations were being conducted (Reference C.8.1, pp. 6) and 62).

From 6 to 11 August, four natives of Bikini Atoll were returned by courier plane. They toured the atolt to observe changes. The only change detected was the presence of a new species of fruit-bearing plant - the papaya. The seeds of this plant apparently reached Bikini during CROSSMOADS. This group departed by aircraft (Reference C.8.1. p. 61).

One representative from Geo-Technical Corporation joined the scientific team on 15 August to assist in seismographic research (Reference C.8.1, p. 62).

A representative from the Navy Hydrographic Office reached the survey site on 20 August to participate in analyses of seawater chemistry. Two additional Navy officers joined the task group on August 25 to assist in scientific experiments (Reference C.8.1, pp. 62 and 63).

### ROLLUP OPERATIONS

In a dispatch to CINCPACELT on 13 August. CTG 10.12 recommended that operations be terminated on 30 August 1947. An affirmative response from CINCPACELT directing that operations cease on that date was received by CTG 10.12 on 14 August (Reference C.8.1. p. 62).

Active preparations for the end of the resurvey operation began on 22 August 1947 (Reference C.8.1, p. 71). Before leaving Bikini Lagoon, all ships in TE 10.12 were instructed to dispose of all lines and other equipment exhibiting radiation in excess of the final clearance limits specified by the Bureau of Ships and the Bureau of Medicine. In the absence of specific directives covering the final clearance limits established for diving dress and associated gear. <u>Coucal</u> was instructed to retain all such equipment pending return to Pearl Barbor, since monitoring had indicated that the contamination present was of a low order and presented no significant radiation hazard (Refetence C.8.2, p. 96).

On 25 August, the securing of shore establishments and loading of ships was begun. LSM-382 completed operations and departed for Kwajalein. Pearl Harbor, and San Francisco on 26 August. <u>Coucal</u> was scheduled to complete diving operations on 27 August and, after offloading some special equipment to <u>Chilton</u>, departed Bikini. LCI(L)-615 departed for Kwajalein on 29 August (Reference C.8.1, p. 63).

Monitoring of <u>Chilton</u>'s hull at the waterline immediately before departure from Bikini Lagoon on 29 August resulted in readings of background and slightly above background level. Monitoring of <u>Chilton</u>'s small boats and deck gear between 29 and 31 August failed to indicate radiation levels above background. Samples of scale taken from Chilton's No. 2 evaporator on 1 September showed a beta plus gamma count of 1.7 times background and a gamma count of 1.25 times background in scale taken from the second stage of the evaporator, and a beta plus gamma count of 2.3 times background and a gamma count of 1.3 times background in scale taken from the first stage. External monitoring of <u>Chilton's</u> evaporators, condensers, and other saltwater systems produced no evidence of radiation above normal background levels (Reference C.8.2, p. 96 and 98).

<u>Chilton</u> was loaded and ready for sea at 1000 on 29 August. A final inspection of secured installations ashore was made and ship musters were held to ensure that all personnel were properly accounted for. The last courier plane for Kwajalein embarked passengers and loaded mail. <u>Chilton</u> then departed for Pearl Harbor, arriving there on 3 September 1947 (Reference C.8.1, p. 63).

TG 10.12 was dissolved at Pearl Harbor on 4 September 1947 (Reference C.8.1, p. 73).

During the concluding phase of the operation, the Medical Legal Board submitted a report to the project officer. The report began by summarizing the radiological situation. Consistent with the foregoing account, only certain isolated areas and accumulations of debris were found to produce beta and gamma radiation in excess of the tolerance limit of 0.1 R/24 hours (Reference C.8.1, p. 123).

The maximum radioactivity observed during the resurvey was found on a deposit of tar or oil residue on a ledge of rock on a sandspit extending west of Bikini Island. This area produced a beta plus gamma reading of 0.6 R/24 hours and a gamma reading of 0.18 R/24 hours (Reference C.B.1, p. 123).

Concerning the operational phase of the resurvey, the report noted that (Reference C.8.1, pp. 123 and 124):

- Radsafe and health procedures specified in the operation plan were observed throughout the operation.
- Radsafe officers accompanied all scientific work parties during initial landings and continued to accompany these parties until it had been determined that the area in question was free from any hazardous concentrations of radioactive materials.
- Bach diver returning to <u>Coural</u> was initially bosed down with seawater while still on the stage and before being taken aboard. Following removal of the diving suit, divers and gear were monitored with Model 263 survey meters to detect any gamma and beta radiation.
- Personnel monitoring was carried out aboard <u>Chilton</u> until it was determined that this procedure was no longer required.
- Personnel decontamination stations were established on both <u>Chilton</u> and <u>Coucal</u> in the event that monitoring indicated presence of excessive radiation on either individuals or clothing.

- All members of the scientific teams wore individual film badges during the initial stages of the operation and until such time as it had been determined that this procedure could be modified or dispensed with entirely in areas that presented no radiological hazards.
- Since deep diving and underwater inspection operations were considered to pose the greatest potential hazard, film badges and pocket dosimeters were carried by each diver throughout the course of the underwater work. Three film badges, each enclosed in a waterproof covering, were attached to the inner clothing of the diver before descent -- one at waist height, one at chest height, and one in a shoe. During the early phases of the operation, these film badges were delivered to the Photodosimetry Unit for developing and analysis at the conclusion of each dive. Later, when it had been determined that hazardous concentrations of radioactive materials were not being encountered, badges were analyzed at weekly intervals.
- A total of 517 film badges were processed by the Photodosimetry unit of the Radiological Health Section. No badge carcied during the course of the operation gave evidence of exposure to beta or gamma tadiation in excess of the daily specified tolerance limit of 0.1 R/24 hours.
- Biological analyses conducted during the resurvey indicated the presence of varying amounts of tadioactivity in marine life in Bikini Lagoon, though not in sufficient concentrations to pose an external radiation hazard. Instructions issued by the task group commander on the recommendation of the Radiological Health Advisory Board directed that no marine life would be consumed by personnel involved in the operation.
- Recreational swimping at designated beaches on Bikini Island was allowed only after chemical analysis of lagoon water indicated a plutonium content of less than 10<sup>-11</sup> grams per liter of water. A gross analysis of the fission products present in the water indicated a content of less than 10<sup>-12</sup> curies per liter of water.
- On the basis of radiochemical analysis of edible fruits. the original ban on the consumption of such fruits was lifted on 24 July by the task group commander acting on the recommendation of the Radiological Health Advisory Board.

The Statement of Findings of the Medical Legal Board noted that (Reference C.B.t, p. 124):

In view of the data obtained and the observations made during the period 15 July 1947 through 26 August 1947, the undersigned members of the Medical Legal Board. Bikini Scientific Resurvey, Attest, that to the best of their knowledge and be-Hef, no Individual assigned to, attached to, or participating in the Bikini Scientific Resurvey during the same period of time was exposed to radiation in excess of the established standards.

# PERSONNEL EXPOSURE LEVELS

The photographic dosimetric equipment that was employed consisted of (Reference C.8.2, p. 101):

- An Ansco-Sweet densitometer for reading densities of films exposed in film badges
- Type K flim badges (500) obtained from the Radiation Laboratory. San Francisco Naval Shipyard
- Holders and DuPont film packets obtained from the Atomic Energy Commission at Oak Ridge, Tennessee (300 holders and 5,000 packets).

Both types of film badges were exposed to a standard radium source for calibration. Each type had an approximate sensitivity range of 0.02 to 2 R.

Project reports differ as to the number of badges used during the operation. The Report of Findings of the Hedical Legal Board stated (Reference C.S.I. p. 124):

Of the total of 517 (emphasis added) film badges processed by the Photodosimetry Unit of the Radiological Health Section, no badge carried during the course of the Resurvey Operations gave evidence of exposure to beta or gamma radiation in excess of the tolerance limits referred to in Paragraph A.L., above.

On the other hand, the section entitled "Radiological Health at Bikin!" presented in Volume II of the Report of the Technical Director states (Reference C.8.2, p. 101):

During the period from 15 July to 29 August 1947. a total of 572 [emphasis added] film badges were developed, and the exposures interpreted. None of these badges was found to have been exposed to sufficient radiation to acquire computable density. From film-badge data it was determined that there were no personnel exposures in excess of the daily tolerance limit of 0.1R, beta plus gamma. All developed badges were alphabetically filed, and will be permanently stored at the Radiation Laboratory. San Francisco Naval Shipyatd, as a permanent exposure record for personnel connected with this Resurvey Operation.

While these two sources differ as to the number of badges examined, both reach the same conclusion regarding badge readings -- no personnel exposures in excess of specified daily tolerance limits occurred; however, neither the badges nor any listing of the readings have been located.

# RESURVEY CONCLUSIONS

The Bikint resurvey concluded that the atomic detonations caused only minor, transient disturbance to the plant and onimal populations in the atea. Some plants and animals in the immediate area of the underwater detonation were killed and some highly radioactive plants, fish, and invertebrates of impaired vitality were found during the 3 weeks following Test BAKER. One year later, a careful search of the islands, reefs, and lagoon revealed no changes in populations, number, or composition. No physiological damage could definitely be attributed to the detonation. Some dying cotal on a reef between Biking and Romen Islands provided the closest case of damage from the test. The corals (Heliopora) were in fine condition a few weeks before fest BAKER. At the time of the detonation, the tops of the coral clumps were about 1 foot (0.3 meter) underwater and the tide was rising. They may have been killed by the radioactive fission products that washed over the reef after raining down from the radioactive cloud. More probable causes of the corals' death were contamination from oil from the sunken ships or by heavy rain during one of the low tides. The question of what caused the death of the corals remained unsolved (Reference A.4. pp. 74 and 75).

One of the most discussed effects of the radioactivity was the possibility of producing genetic changes. At Bikini, more than 1.000 species of organisms were exposed to radioactivity, and many of them had reproduced at least once. A careful search of tens of thousands of specimens in the area failed to show definite evidence of aberrant forms. Since mutations produced by radiation almost invariably do not survive, the result was not unexpected (Reference A.4, p. 76). No scientific investigations found evidence of radiation-induced genetic effects during the 6 weeks of work in the atoll (Reference A.4, p. 77).

The Radiological Safety Section, which monitored most of the Islands, found few places where beta-gamma readings exceeded the tolerance limit of 0.1 8/24 hours. The studies of sea urchins and other invertebrates led to the observation that the specimens examined in the shipboard laboratories were healthy, abundant, and reproducing normally.

Occasionally there were reports of situations in which radioactivity may have played a part in generating ecological anomalies, although other, nonradiological, factors could have been present. The Technical Director of the resurvey stated that the level of residual radioactivity was low and not dangerous (Reference A.4, p. 61). While there was no doubt that decay and dilution had reduced residual radioactivity to a low level, questions persisted (Reference A.4, p. 67).

For example, there remained the question of the unexplained turbidity of the eastern lagoon waters near Bikini Island and the target area. Before Test BAKER, the waters had been clear and transparent. However, in 1947 Chilton noted the lagoon waters were opaque. The most likely cause for the increased opacity was an increase in plankton (Reference A.4, pp. 66 and 67). Hypotheses for the increased plankton growth included seasonal effects (later rejected) and the discharge of untreated sewage by personnel at CROSSROADS in 1946. While the scientists agreed the turbidity was unique, they were unwilling to conclude that the atomic detonations had set up conditions that would encourage an increase in plankton (Reference A.4, p. 68). Studies of radioactivity made in the vicinity of the target ships indicated that there were "large amounts of radioactive material" on the lagoon bottom, particularly in the vicinity of the target array (Reference A.4, p. 70). The radioactivity made its way into the food chain as sea cucumbers and worms ingested and excreted the mud. The plants took up some of the excreted radioactivity. The plants were eaten by small fish, which were preved upon by larger fish. While the animals excreted most of the radioactive material. A small amount was retained, particularly by the liver, spleen, kidneys, and gonads. Furthermore, the ingestion of radioactive material resulted in a very widespread distribution of radioactivity in the lagoon. The radioactivity detected at Bikini was low, yet it was traceable in food chains. Fission products were found occurring in fish and invertebrates such as clams, snalls, oysters, corais, sponges, ortopods, crabs, sea urchins, sea cucumbers, spiny jobstets, and shring. They were also represented in the algoe found in the lagoon (Reference A.4, p. 73).

# CHAPTER 7

## U.S. ARMY GROUND FORCES PARTICIPATION

#### INTRODUCTION.

Approximately 3.300 Army personnel were assigned to Operation CROSSROADS (Reference C.9.206, p. III-(A)-3). Of the total number of Army personnel, approximately 350 were assigned to Task Group (TG) 1.4 (Army Ground Group) and 2.500 to TG 1.5 (Army Air Group). The forces that were to become the U.S. Air Force in 1947 were still part of the Army in 1946. A summary of Army Air Forces participation is discussed in Chapter 8. In addition to the 71 Army officers assigned to TG 1.4. another 70 Army ground officers have been identified on the Joint Task Force 1 (JTF I) Officer Roster. Fifty of these were assigned to the Radiological Safety Section. Approximately 380 Army ground personnel remain without positive unit identification. Some of these probably were assigned to JTF I Hq staff. Others were probably assigned to TU 1.5.5 (Air Service Unit) at Kwajalein as engineers and military police.

#### TASK GROUP 1.4 (ARMY GROUND GROUP)

TO 1.4 had two assigned missions: to determine damage to selected Army equipment exposed at varying distances from the point of detonation and to measure the bombs' radii of effectiveness. CTG 1.4 maintained close liaison with various agencies operating under the Director of Ship Material and was assigned the operating code designation 014B. Senior representatives of each of the technical services under TG 1.4 were at the same time in command of a task unit and also a member of the technical staff (Reference C.9.)49, p. 3).

TG 1.4 was berthed aboard the support ship USS Wharton (AP-7) and consisted of a headquarters and the following six operating task units (TV):

- TU 1.4.1 (Engineer Unit)
- TU 1.4.2 (Signal Unit)
- TU 1.4.3 (Ordnance Unit)
- TU 1.4.4 (Chemical Unit)
- TU 1.4.5 (Quartermaster Unit)
- TU 1.4.6 (Air Unit).

Headquarters was composed of Command, Technical, and Administrative sections. The functions of Command and Administrative sections were the normal ones implied by their respective designations. The Technical Section was composed of representatives of six branches, i.e., Corps of Engineers, Chemical Warfare Service. etc. Its members planned. correlated, and supervised test procedures: prepared reports covering test items: and assisted the commanding officer in preparation of the test. The provisional headquarters was activated on 22 March 1946 with an operating strength of five officers and eighteen enlisted personnel. Four officers and nine enlisted headquarters personnel have been identified, none of whom were badged.

Each operating task unit was under the command of a technical staff officer and was composed of a staff and a group of inspection teams. These teams were assigned to target ships and were responsible for loading. securing. maintaining. and inspecting test items. Teams were to reboard target ships after each detonation after the ships had been radiologically cleared and declared safe for boarding.

#### Task Unit 1.4.1 (Engineer Unit)

TU 1.4.1 conducted tests to determine the radii of damage to typical items of Corps of Engineers equipment and to discover weaknesses that might be corrected by improved design. Items such as construction tractors, crawlers, caterpillars, floating bridges, and firefighting and water-supply equipment were exposed aboard the target attack transports <u>USS Gilliam</u> (APA-57) at 800 yards (732 meters). <u>USS Dawson</u> (APA-79) at 1.500 yards (1.37 km), and <u>USS Butte</u> (APA-66) at 2,200 yards (2.01 km) for Test ABLS. During Test BAKER, water putification units and other equipment were exposed aboard <u>USS LST-545</u> 4.100 yards (3.75 km), and <u>USS LST-125</u> and LCM-5 5.700 yards (5.21 km) away on Bikini Island (Reference C.9.150, p. 15). TU 1.4.1 operating strength called for 12 officers, 53 enlisted personnel, and 2 civilians (Reference C.9.150, Appendix E. p. 1). Six officers, four enlisted personnel, and one civilian have been identified, but none can be positively identified as badged.

### Task Unit 1.4.2 (Signal Unit)

Signal Corps participation in Tests ABLE and BAKER was to determine the effects of damage versus distance on Signal Corps equipment such as switchboards, generators, batteries, wires, and Installations, Equipment was exposed aboard <u>USS Nevada</u> (BB-36). <u>USS Arkansas</u> (BR-33), USS <u>Independence</u> (CVL-22), <u>Prinz Eugen</u>, <u>USS Saratoga</u> (CV-3), <u>USS New York</u> (BB-34), <u>USS Gasconade</u> (APA-85), and on Bikini Island for Test ABLE. For Test BAKER, items were exposed aboard <u>Arkansas</u>, <u>Nevada</u>, <u>Saratoga</u>, and <u>Prinz Eugen</u>. The unit operating strength called for nine officers and twenty-seven enlisted personnel as well as nine civilians from Signal Corps Engineer Laboratory. Seven officers, twenty-six enlisted men, and nine civilians have been identified. Two individuals can be identified as having been badged. One had a badge he carried from 30 June to 7 July 1946; it read zero. The other was badged on 19 August, and his badge read 0.130 R (gamma). He may also have had a badge showing zero exposure on 14 August.

### Task Unit 1.4.3 (Ordnance Unit)

To facilitate control and preclude duplication it was agreed that the Ordnance Unit would handle all explosives and demolition materials for the Corps of Engineers. Objectives of the TU 1.4.3 tests were to determine whether changes in design of ordnance materials. ammunition, and packaging were necessary to minimize the effects of a nuclear detonation and to collect technical data that might aid in Euture designs. Items were placed on <u>Arkansas</u>, <u>Nevada</u>, <u>USS Pennsylvania</u> (BB-38). <u>Saratoga</u>, YOG-83, <u>USS LST-52</u>. <u>USS LST-661</u>, <u>USS LST-220</u>, and <u>LST-545</u> for both tests: some test items were also located on Bikini Island. Operating strength called for 17 officers and 72 enlisted personnel.

Only 15 officers and 38 enlisted personnel have been identified and none were badged. It was not until 31 July that ordnance inspection teams were allowed to inspect the Army equipment after Test BAXER (Reference B.5.3: Reference C.9.155, p. 1).

#### lask Unit 1.4.4 (Chemical Unit)

Chemical Warfare Service personnel conducted tests to expose selected items of chemical warfare equipment and fillings to the effects of a nuclear detonation. The tests had two objectives: first, to determine the effects of heat, blast, and radiation on packaging, chemical composition, and functioning: second, to determine whether changes in design and chemical composition of these items were necessary to ensure the)r effective use during and after exposure. Items were displayed during Test ABLE on the following six target ships (distances from <u>Nevada</u>, center of target array, in parentheses) YOG-83 (1,000 yards [914 meters]), LCT-818 (1,200 yards [1.10 km]), LST-52 (1.500 yards [1.37 km]). LCT-874 (2.000 yards [1.83 km]). LST-661 (2.300 yards [2.10 km]), and LST-220 (3,200 yards [2.93 km]). The Chemical Warfare Service did not participate in Test BAKER. The operating strength of this unit called for six officers, seventeen enlisted personnel, and one civilian. Except for one enlisted man, all have been identified. Only one person was badged and he had a zero reading (Reference 8.5.3; Reference C.9.151, p. 1-2, Appendix F).

# Task Unit 1.4.5 (Quartermaster Unit)

The objectives for TU 1.4.5 tests were to determine the effects of a nuclear detonation on quartermaster supplies and prepare recommendations for future implementation. This unit was composed of a technical staff of four officers and five emlisted men and ll test teams consisting of one officer and six emlisted men each. TU 1.4.5 was activated from 1 February through 10 August 1946. Test ABLE tested the effects on quartermaster supplies in open storage from an altburst, and Test PAKER tested the effects on quartermaster supplies in underwater in various stages of an amphibious invasion operation from an underwater explosion.

Test items for ABLE were displayed on the following 13 target ships: <u>New York</u>, <u>Arkansas</u>, <u>Nevada</u>, <u>Pennsylvania</u>, <u>USS Ponsacola</u> (CA-24). <u>Saratoga</u>, <u>USS Catteret</u> (APA-70), <u>USS Fallon</u> (APA-81), <u>USS Cortland</u> (APA-75), <u>USS Bladen</u> (APA-63), <u>USS Niagara</u> (APA-87), <u>USS Catron</u> (APA-71), and AROC-13, <u>USS Rockwall</u> (APA-230) was used as a supply ship. After each target vessel was declared radiologically safe, test teams reboarded their assigned vessels and prepared inspection reports on damage sustained by test items.

After Test ABLE. TU 1.4.5 was divided into three groups. The first group consisted of three officets, three enlisted personnel, three test teams, and a security detachment to guard supply dumps on Bikini. Each test team had one officer and fourteen enlisted personnel, and the security detachment consisted of one officer and twelve enlisted personnel. The second group was composed of chemists and chemical engineers who departed for Honolulu before BAKER to compile data from ABLE. Members of the third group were relieved from further duty with TU 1.4.5 and proceeded to their normal duty stations. The latter two groups departed Bikini on 13 July aboard USS Chilton (APA-38) for Hawaii and the mainland. Three displays were used for Test BAKER: aboard LST-545, 4.000 yards (3.66 km) from the blast. LST-125, beached on shore of Bikini, and Bikini Island beachhead. On BAKER D+6. TU 1.4.5, accompanied by radsafe monitors, inspected three displays. In all, 16 officers and 78 enlisted personnel have been identified from this unit. But only 7 were badged; the highest badge reading was 0.21 R (References B.5.3, C.9.155, and C.9.154).

# lask Unit 1.4.6 (Air Unit)

The objectives of TD 1.4.6 were to test nuclear effects on representative items of Army Air Forces equipment at varying distances from Test ABLE. Navy target ships used to expose items were <u>Nevada</u>. <u>Independence</u>, and <u>New York</u>. After radsafe personnel declared each target ship safe, Army Air Forces inspection teams went aboard. Reboarding was as follows:

	Time	Date	Hours after Detonation
New York	i145	2 July	25
Nevada	0830	4 July	71
Independence	0930	5 July	93

The operating strength of this unit called for seven officers and nine enlisted personnel. Reboarding teams were composed of ships' personnel and Army personnel. Seven officers and six enlisted personnel have been identified; none were badged (Reference 8.5.3; Reference C.9.156, p. 218).

# CHAPTER 8 U.S. ARMY ALR FORCES PARTCIPATION

About 2.500 U.S. Army personnel in the Army Air Forces' served in CROSS-ROADS and were assigned to Task Group (TG) 1.5. Army Air Group. The air units of TG 1.5 operated from Kwajalein and Enewetak islands. A small number of personnel (13 have been identified) were assigned to Task Unit (TU) 1.4.6 (Air Unit). This unit is discussed in Chapter 7, "U.S. Army Ground Forces Participation."

In January 1946, the 58th Bombardment Wing of the U.S. Army Fourth Air Force was designated TG 1.5 for CROSSROADS activities. Roswell Army Air Field. New Mexico. was selected as the center for preparations in the continental United States. The 509th Composite Group at Roswell formed the nucleus of the various task units needed for the tests. A large part of the headquarters staff of the 58th Wing at March Army Air Field. California. was transferred to Roswell to form Headquarters. TG 1.5. (Reference C.9.206, Part VIIE). Other units that furnished significant manpower included the 320th Troop Carrier Squadron. 329th Bomb Squadron. 330th Bomb Squadron. 393rd Bomb Squadron, and 1027th Air Materiel Squadron. Table 12 lists all units known to have supplied personnel to TG 1.5.

Functions performed by TG 1.5 included airdropping the shot ABLE nuclear weapon, collecting samples of nuclear debris from the radioactive clouds, weather reconnaissance and prediction. communications support, operation of the airbase at Enewetak Island, photography and air transport support for men and material. It also assisted in some effects experiments associated with measuring blast, heat, and radiation aboard aircraft.

Table 13 lists the task units in TG 1.5. The table shows number of persons in each unit. number badged, and dosimetry breakdown. The information was obtained using May 1946 task unit rosters and the Reynolds Slectrical and Engineering Company's (RESCo) printout of radiation exposure by name. Rosters for June and July 1946 could not be located, and there is some evidence that more personnel were assigned to the various task units during June and July. An undated chart showing task unit totals for Hg TG 1.5 and TU 1.5.1 through TU 1.5.5 was located at Brooks AFB. Texas. Totals for Hg TG 1.5, TU 1.5.1, TU 1.5.2, and TU 1.5.3 are guite close to those on the May rosters (as shown in Table 13). However, the total for TU 1.5.4 is 309 versus 55 in Table 13; and for TU 1.5.5 it is 995 versus 686 in Table 13. Since TU 1.5.4 included personnel who ferried men and equipment to the Pacific, the roster may have included only those assigned on Kwajalein. However, no such explanation is available for the difference in TU 1.5.5.

<sup>&</sup>quot;In 1946 the Air Forces were still part of the U.S. Army.

Table 12. Participating Army Air Forces units, Operation DROSSROAOS.

Unit	Home Station	Task Unit
 1st Ordnance Squadron	Roswell AAF, New Mexico	1,5.1
6th Atronaft Repair Unit (Floating)	<u>SS Brig. Gen. Alfred J. Lyon</u>	Unknown
40th Bemb Group (VK)	Davis Monthan AAF, Arizona	1.5.8
44th Bomb Group	Smoky H111 AAF, Kansas	1.5.2
56th Bomb Wing	March AAF, Callfornia	Hq 15, I.
59th Weather Recon Squadron	Castle AAF, California	1.5.7
Tist AACS Group	Mickam AAF, Hawall	1.5.5
93rd Bomb Group	Clovis AAF, New Mexico	1.5.3
10/th AACS Squadron	Robins AAF, Georgia	1.5.5
110th Army Air Force Base Unit	Milchel AAF, New York	1.5.5
112th Army Air Force Base Unit	Grenter AAF, New Hampshire	1.5.2
123d Army Air Force Base Unit	Seymour-Johnson AAF, North Carolina	1.5.3
136th Army Air Force Base Unit	Myrtle Beach AAF, South Carolina	1.5.2
139th Army Air Force Base Unit	Shaw AAF, South Carolina	1.5.5
145th Army Air Force Base Unit	Selfridge AAF, Michigan	1.5.5
201st Army Air Force Base Unit	Peterson AAF, Colorado	1.5.5
233d Army Air Force Base Unit	Ft. Worth AAF, Texas	1.5.3
234th Army Air Force Base Unit	Clavis AAF, New Mexico	1.5.3
243rd Army Air Force Base Unit	Great Bend AAF, Kansas	1.5.2
245th Army Air Force Base Unit	McCook AAF, Nebraska	1.5.5
247th Army Air Force Base Unit	Smoky Hill AAF, Kansas	1.5.5
263rd Army Atr Force Base Unit	Peterson AAF, Colorado	1.5.5
311th Reconnalissance Wing	Buckley AAF, Colorado	1.5.7
316th froop Carrier Squadron	Pope AAF, North Carolina	1,5,1
320th Troop Carrier Squadron	Roswell AAC, New Mexico	1.5.4
326th Army Air Force Base Unit	MacDill AAF, florida	1.5.5
329th Bomb Squadron	Clovis AAF, New Mexico	1.5.3
330th Bomb Squadron	Clovis AAF, New Mexico	1.5.3
337th Army Air Force Base Unit	Venice AAF, { lorida	1.5.5
390th Air Service Group	Roswell AAF, New Mexico	1.5.5

{continued]

Unit	Home Station	Task Unil
3936 Bomb Squadron	Roswell AAF, New Mexico	1.5.1
400th Army Air force Base Unit	San Francisco AAF, California	1.5.2
120th Army Air Force Base Unit	March AAF, California	1.5.2
\$27th Army Air Force Base Unit	Roswell AAF, New Mexico	1.5.2
\$39th Troop Carrier Squadron	Roswell AAF, New Mexico	1.5.4
44th Bomb Group	Davis-Monthan AAF, Arizona	1.5.3
148th Bamb Group	Ft. Worth AAF, Texas	1.5.2
162d Bomb Group	MacDill AAF, Florida	1.5.2
166th Air Service Group	Sedalla AAF, Missouri	1.5.5
666h Army Ale Force Base Unit	Sedalla AAF, Missouri	1.5.5
67th Army Air Force Base Unit	Salt Lake City AAF, Kearns, Utah	1.5.5
Soath Bomb Group	Roswell AAF, New Mexico	Hq TG 1.5
177th Air Service Group	Pope AAF, North Carolina	1.5.5
iO9th Composite Group	Roswell AAF, New Mexico	Hq 16 (.
19th Air Services Group	Smoky Hill AAF, Kansas	1.5.2
03d Air Engineering Squadron	Roswell AAF, New Mertco	1.5.5
102d Army Air Force Base Unit	Mitchel AAF, New York	1.5.5
19th Air Materiel Squadron	Pope AAF, North Carolina	1.5.5
1541h Army Air Force Base Unit	McCord AAF, Washington	1.5.5
/75th Army Air Force Base Unit	Hickam AAF, Hawaii	1.5.5
189th Bomb Squadron	Clovis AAF, New Mexico	1.5.3
790th Bomb Squadron	Clovis AAF, New Mexico	1.5.3
804th Army Air Force Base Unit	Greenville AAF, South Carolina	1.5.5
Bllth AAB FU	it. Benning, Georgia	1.5.5
812th Army Air Force Base Unit	Pope AAF, North Carolina	1.5.5
902d Army Air Force Base Unit	Orlando AAF, Florida	1.5.2
1027th Air Materiel Squadron	Roswell AAF, New Mexico	1.5.5
1395th Military Police Squadron	Roswell AAF, New Mexico	1,5.5
1503rd Army Air Force Base Unit	Kamilton AAF, California	1.5.5
2135th Army Air Force Base Unit	Tyndall AAF, Florida	1.5.2
2140th Army Air Force Base Unit	Smyrna AAF, Tennessee	1.5.2

# Table 12. Participating Army Air Forces units. Operation CROSSROADS (continued).

(continued)

Table )2.	Participating Army Air Forces units,	
	Operation CROSSROADS (continued).	

	Unit			Home Station	Task Unit
2530th	Army Alr	Force	Base Un'	IL Selman AAF, Louisiana	1.5.2
25331ħ	Army Atr	force	Base Un'	It Goodfellow AAF, Texas	1.5.2
2621st	Army Air	force	Base Un'	IL Barksdale AAF, Louisana	1.5.2
62 <b>2</b> th	Army Air	Fonce	Base Un	lt Mather AAF, Callfornia	1.5.2
010th	Army Air	Force	Base Un'	t Williams AAF, Arizona	1.5.2
1501 s t	Army Air	Force	Base Un	IL Boca Raton AAF, Florida	1.5.2
705th	Army Air	force	8ase Un	IL Lowry AAF, Colorado	1.5.2
000th	Army Air	force	Base Un	It Patterson AAF, Ohlo	1.5.2
121st	Army Air	Force	Base Un'	L Kelly AAF, Texas	1.5.2
135th	Army Alr	Force	Base Un'	IL HIII AAF, Utah	1.5.4
136th	Army Atr	Force	Base Un	lt Tinker AAF, Oklahoma	1.5.2
itr Mar	terial Co	maand		Wright AAF, Ohio	1.5.2 1.5.3 1.5.8

Source: Reference C.13.5,

Table 13. U.S. Army Air Forces personnel exposure, CROSSROADS.

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	No. of	No. of	[>	opsure Range:	(H) 2
Element	Persons Listed	Per sons Badged	0	0,001-0.5	0.5-1
Hq TG 3.5	139	20		3	
TU 1.5.1	367	48	42	6	
3.5.2	412	149	143	5	
1.5.3	450	117	30	87	
1.5.4	55	8	8		
1.5.5	686	2	0	2	
1.5.7	56	Ð			
1.5.8	27	15	14	1	
1.5.9	48	8	2	5	)
Others	249	Û			
Sources:	References	C.13.4.	8.5.3,	and 8.5.4.	

Eleven personnel listed in the REECo exposure data as being on Enewetak on 25 July are not on any TG 1.5 roster. Five of these have sequential badge numbers. This strongly implies that they were an aircraft crew in TU 1.5.3. Since there were no other units on Enewetak, these 11 individuals have been counted with TU 1.5.3. It is not possible to arbitrarily group otherwise unidentified personnel on Kwajalein since numerous units were there besides Army Air Forces units.

The REECo data (taken from original source documents) shows last name only (no first name or initials) in about 60 percent of the listings, so for the more common names such as Smith, Jones, and Williams it is very difficult to match the right name. In some cases, e.g., aircraft crews, men were given sequential badge numbers and it was possible to match common names positively. In general, however, whenever there was doubt it was assumed that there was no match. In addition to name, the REECO list shows badge number, location (Enewetak, Kwajalein, ships by name, etc.), badge dates, and badge exposure. It does not identify an individual with a particular organization, only his location. Thus the task unit costers have to be used along with the dosimetry list.

TU 1.5.6 and TU 1.5.10 are not shown in Table 13. TU 1.5.6 was consolidated with TU 1.5.3 in June 1946. TU 1.5.3 totals reflect personnel from both units. TU 1.5.10 is synonymous with Rg TG 1.5 and the latter designation is used in Table 13.

#### HEADQUARTERS TASK GROUP 1.5

This group was made up primarily of personnel from Hq 58th Wing and Hq 509th Group. The listing in Table 13 includes personnel assigned to Hq TG 1.5 and Hq 509th Composite Group on Kwajalein. Why these two units are listed separately is unknown. It may be that the personnel in Hq 509th Composite Group were recent arrivals at Kwajalein and were pending assignment to one of the task units. Only 20 of 139 personnel were badged and no exposures exceeded 0.5 R. Three civilians are included in the totals.

#### Task Unit 1.5.1 [factical Operations Unit]

Personnel from the 393rd Bombardment Squadron of the 509th Group Roswell MAF, New Mexico, made up the majority of TO 1.5.1. This unit operated seven B-29 aircraft from Kwajalein including the bomb drop aircraft, two command-andcontrol aircraft, two pressure-gauge drop aircraft, and two space aircraft. Of 367 personnel associated with TO 1.5.1. 48 were badged, and all exposures were less than 0.5 R. Almost all the badged personnel were aircraft crews; 27 of the 48 were officers. There were no civilians in this task unit.

### lask Unit 1.5.2 (Army Air Photographic Unit)

Personnel drawn from several units in the Air Materiel Command formed this task unit. This unit was responsible for a large part of the technical photography program during CROSSROADS. It operated two C-54s and eight F 13s (modified B-29s) from Xwajalein, which were equipped with very-high-speed and normal-speed motion picture cameras and 35-mm still cameras. Table 13 provides dosimetry information for the 149 personnel out of 412 who were badged. All but 15 of the badged personnel were aircraft crewmembers. This unit had 55 civilians assigned, several of whom were cameramen on the aircraft and were badged. The highest exposure, 0.05 R, was recorded by a civilian.

## Task Unit 1.5.3 (Instrumentation and Test Requirements Unit)

Personnel drawn from several units within the Air Materiel Command made up this task unit. TO 1.5.3 was consolidated with the Drone Aircraft Unit, TO 1.5.6. and was one of two organizations based on Enewetak Island for the CROSS-ROADS operation. The aircrews that flew the B-17 drones came from the 329th and 330th Bomb Squadrons, Clovis AAF, New Mexico, 70 1.5.3 operated the airfield and flew and maintained the seven B-17 drone controllers and ten B-17 drone aircraft used for cloud sampling. It also operated all base support functions at Enewetak including mess facilities, post exchange, special services, rations, fuel, signal and engineer support, and the message center (Reference B.5.1). There were 117 personnel badged out of a total of 450. All recorded exposures were less than 0.5 R. The vast majority of those badged were members of Aircraft crews flying the B-17 controller aircraft. However, several firefighters and sheetmetal workers were also badged. The badging of fitefighters is understandable since they may have had to fight a fire on contaminated airctaft. Perhaps the sheetmetal workers performed duties associated with the gaseous or particulate filter boxes on the drone B-17s, which were of sheetmetal construction.

### Task Unit 1.5.4 (Air Transport Unit)

Personnel for TU 1.5.4 came primarily from the 320th Troop Carrier Squadron of the 509th Composite Group at Roswell Army Air Field, New Mexico. This unit provided airlift to and from the United States to Enewetak-Kwajalein. and performed air support missions in the Enewetak-Kwajalein-Bikini area. Although documents reflect TU 1.5.4 had 20 C 46s and 10 C-54s, there were not sufficient personnel for this many aircraft. In fact, the 20 C 46s were manned by the 439th Troop Carrier Squadron. Roswell Army Air Field. New Mexico. and were used to ferry men and materiel to and from the Pacific area. These personnel were never assigned to the joint task force. Only eight personnel were badged. four of whom were officers. None of the eight recorded any exposure.

# Task Holt 1.5.5 (Air Service Unit)

Personnel for this unit came primarily from the 603rd Air Engineering Squadron, 1027th Materiel Squadron, 1395th Military Police Squadron, and the 390th Headquarters and Service Squadron. All were part of the 509th Composite Group at Roswell, New Mexico. TU 1.5.5 provided the supply and maintenance functions to Army Air Forces units on Kwajalein. In addition, it operated a mess Facility, the special services office, a post exchange, rations breakdown point, fuel dump, signal and engineer supply point, and a message center for the Army Air Forces needs. It also had weather forecasting personnel and military policemen assigned to it. Of 686 personnel on the roster only 2 were badged. Their exposures were less than 0.10 R.

#### Task Unit 1.5.6 (Army Drone Unit)

This unit was combined with TU 1.5.3 before ABLE and BAKER tests.

### Task Unit 1.5.7 (Army Air Weather Reconnaissance Unit)

Personnel for this task unit came primarily from the 59th Reconnaissance Squadron at Castle Army Air Field, California. This unit operated three WB-29s from Kwajalein to monitor weather around Bikini before the tests. On days before each shot, its planes monitored the weather at long ranges. Just after midnight the morning of each shot, its planes took off and monitored the weather in the Bikini area. Records indicate that none of these personnel were badged.

#### Task Unit 1.5.8 (Air Orientation Unit)

Personnel and aircraft for TU 1.5.8 came from units in the Air Materiel Command, Stationed at Kwajalein, it was responsible for aiding and transporting observers, visitors, news broadcasters, and the press. It furnished facilities for broadcasting and news releases on Rwajalein and provided two 8-29s and two borrowed C-54s for media representatives to view the detonations and their results. Although no coster could be located for TU 1.5.8. a Letter Order from the 40th Bomb Group provided the names of 27 personnel assigned to TU 1.5.8. Nore personnel were probably in this unit, but they cannot be identified. Of the 27 personnel identified. 15 were badged and only one recorded any exposure, 0.06 R.

#### Task Unit 1.5.9 (Air-Sea Rescue Unit)

This unit was stationed on Enewetak with TU 1.5.3, and, in fact, was part of TU 1.5.3 until June 1946. It was made a separate task unit by Change No. 4 to the JTF 1 Op Plan 1-46 dated 30 May 1946. It operated two B-17 air-sea rescue aircraft equipped to support air sea rescue operations for downed aircraft crews. It patrolled the area between Enewetak and Bikini, which was the flight path of the B-17 drones and B-17 controllers flying out of Enewetak. Although no coster for TU 1.5.9 personnel could be located, a set of orders marked "VOCG Mid Pac, eff 6 Hay 46" (Verbai Order Commanding General Mid-Pacific, effective 6 May 1946) was located, assigning 40 personnel from the 4th Emergency Rescue Squadron. APO 244. to TG 1.5. The remaining eight on Table 13 were identified from a TU 1.5.3 roster made up before TU 1.5.9 broke away from TU 1.5.3. Only eight personnel ware badged, all of whom were officers. Pour of these eight are also listed as radsafe monitors in the Radsafe Group of the Instrumentation Division (see Chapter 3). They were badged and received exposures in August as well as on both shot days. Two other officers in TU 1.5.9 appear to have performed radsafe monitoring duties as well since they were also badged and received exposures in August and on both shot days. These latter two may have been assigned to radsafe duties after the 20 April 1946. edition of the Instrumentation Division roster was formulated.

It is unusual that six officers from this unit received exposures on I July and 25 July (shot days), while no one else in the unit did. Furthermore, the location for all six on both dates is shown as "Enlwetok." They obviously were not members of a B-17 air-sea rescue crew since no one else was badged. They may have monitored returning drones for radiation at Enewetak on those dates and then went on to other radsafe monitoring duties in August. The highest exposure of the six was 0.77 R. recorded by an Army Air Forces captain. He was badged three times in August for a total of 0.47 R and on both shot days when he recorded a total of 0.30 R. As mentioned above, his location on shot days was "Eniwetok:" however, his locations in August were target ships in Bikini Lagoon. His name is so unusual that it is unlikely that these were two different individuals, although it remains a possibility since the REECo exposure list shows no initials for this name.

# OTHERS.

Unit orders were located that identify the 6th Aircraft Repair Unit (Floating) as being aboard <u>SS Brigadler General Alfred J. Lyon</u> at Kwajalein during CROSSROADS. <u>Lyon</u> was a U.S. Army aircraft repair ship. Names of assigned personnel do not appear on other TG 1.5 rosters. None of the personnel assigned this unit has a record of being badged during CROSSROADS.

# CHAPTER 9

# U.S. NAVY PARTICIPATION

Operation CROSSROADS was popularly perceived as a Navy operation. The Deputy Task Force Commander for Aviation, an Army Air Forces officer, observed that (Reference C.9.206, pp. II-(8)-3 and II-(8)-4):

Despite all efforts to the contrary on the part of the Task Force Commander and his officers in charge of public relations, news releases and publicity in the majority of cases tended to create. In the mind of the public, the impression that the tests were primarily a naval activity rather than a joint effort in which all services were participating and in which they were equally entitled to praise or censure.

That this was the case is not surprising. From every point of view except the organizational. CROSSROADS was predominantly a U.S. Navy operation. The primary mission of the test was to determine the effects of nuclear detonations on naval vessels. Commander Joint Task Force 1 (CJTF 1) was a Navy officer, and the majority of his joint staff were Navy personnel. In all, over 37,000 Navy personnel participated in CROSSROADS, approximately 90 percent of the total combined military and civilian population of the operation. There were 45 Navy aircreft and 237 Navy ships involved as full-time participants.

The ships were in two categories: support ships and target ships. In the support group were 153 large and small ships, which provided the berthing, messing, laboratory, and office space for the task force. In the target group were 93 vessels for Test ABLE and 92 vessels for Test BAKER, ranging from battleships to small amphibious craft. Of the target ships only 12 were remained by their crews after the tests. I3 were sunk after ABLE or BAKER, 8 were towed to Pearl Harbor or the United States for inspection, and the remainder were sunk at Bikini or Kwajalein. The target ships that were later cemanned were those with low radioactive contamination and no significant structural damage. Support ships evacuated the lagoon before each shot and took all per sonnel, including target ship crews, to a safe distance outside Bikini Lagoon. Tables 14 and 15 summarize the Navy vessels' participation in CROSSROADS. Ship histories, largely extracted from the ships' deck logs, which present information pertinent to potential personnel exposure, make up Appendix A to this report.

In the remainder of this chapter, the other Navy components of JTF 1 are discussed. For each unit, except small support ships, detailed information is given on the events in which they were involved during CRO3SROADS. Discussed are Navy air units, diving units, and other Navy units that had some potential for radiological exposure. lable 14. CROSSROADS target vessels and their disposition.

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ont threat 1 CROSSROADS target vessels and their dispusition Table 14. Table 14. CROSSROADS target vessels and their disposition (continued).

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Table 14. CROSSROADS target vessels and their disposition (continued).

Yeste I	Biktat Departure	Krèja lein Arrisal	(wh)ale's Urparture	Oestination and Arrival	Decontaminetion Location	Operationa' Clearance	Final (learance
- 1891-918; remember 2 <u>8</u> 9	da gua es	30 Pug 46	l Sep th	Pear   Narbor San Francingo 4 Oct 44	San Francisco	b Dec 46	44 940 EI
<u>455 Alai</u> (48-6)	dt guð Es	29 Aug 46	28 £15 84	Pears Harbor San Pedro 27 Sep 46	San Utego	By 1 Jun 47	VPQVNU
uss <u>Albeen</u> arin (Au-si <sup>alb</sup>	<b>41 .</b> NC 52	\$1 IN \$2	94 I NC 02	Pearl Harbor San Pedro 12 Aug 46	Wat required		By 27 Nov 16
<u>455.</u> Alle <u>e B. Sumer</u> (DU-692)	9+ 6 <b>n</b> + 0,			Pearl Harbor San Dlego San Irancisco Puget Sqund 30 Drt 45	Puget Squrd	14 Nov 45	() Jen 4)
NF4-27	24 Aug 46	26 445 46	1961 ¥INC	Los Angeles	Riejeje'r	75 Feb 47	10 Mar 470
₩ <u>155 Appalptnian</u> 1465-1) <sup>4</sup>	29 Jul 46	the for the	94 LN: 05	Pearl Harbor Sem Francisco 16 Aug 46	Not required	2 Dct 46	3 041 46
195-160 <u>7305</u>	4 <b>1 C</b> ny 8			Pearl Harbor San Fransisso 22 Ang 46	San froncisco	3y 22 Nov 46	1 <b>3 De</b> c 46
82-1 <b>8</b> V	31 6ry 52	Zú Aug Ab lb Sep Ab	lb Sep 4b	Searl Harbor 3 Out 46	Peal harbor	18 149 181	18 feb 47
<mark>uss Artents</mark> (AKA-21)	18 Aug 46			Pearl Marbor 24 Aug 46	San francisco	20 Roy 46	27 Oer 46
466-124b	25 NJ9 46	şe ene şç	9 Sep (b	Vedri Marbor Pugat Sound 25 Nov 45	Pujel Stund	Unhnow	18 Dec 45

Table 15. CR0SSR0ADS support ships and decontamination locations.

<sup>4</sup>Ship not prevent at Itains for sufficient period after SAMER lest to be radiologically suspect.

<sup>b</sup>Shot Bakir onty <sup>c</sup>inter-ed drow various sources.

|cont )nued]

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¥0550	Bitini Departure	Kuðjalein Artivzl	Kutjaleto Depárlure	Destination and Arrival	Decontaningtson Location	Operational Clearance	final Clearance
A14-150	1 Sep 46	3 Sep 46	8 Sep tb	Pearl Harbor Puget Sound 25 Nov 46	Puget Sound	24 feb 4)	Unknown
AIA-185	5 5ep 46	7 Sep 46	97 đag g	Pearl Harbor 20 Sep 46	Pràc' Hạnbur Sận Diêgộ	13 Dec 46	18 Jan 47
414 19 <i>1</i>	34 BM¥ #2	de pue es	II Sep 4b	⊭∉ari Marbor San Francisco 9.0¢4.46	San Olego	6 Nov 46	By 77 Nov 66
(\$I-15)	3 Gr Q 40	4 50p 46	8 Srp 46	Pearl Harbor Sàn Srincisco 12 Oct 46	San francisco	14 NGY 46	10 feb 47
A19-4C	di gui E'S	36 Aug 46	8 Srp 46	Pearl Harbor 21 Sep 45	Sin francisco	17 Oec 46	21 Dec 46
16-91	1 Sep 46	3 5 9 p 46	8 Sep 46	Johnston Island Pearl Harbor Breeston 27 Nov 46	Puget Sound	12 Dec 46	By 4 Jar 4?
4 <u>55,Avery Jslanb</u> (AC 76)	1 Aug 46			San francisco 21 Aug 46	Sin francisco	3 Dec 46	8y 4 Jan 47
<u>155 Barton</u>  03-172	41 Gr¥ 01			Pesri Marðar San Diega 22 Aug 46	San Francisco	2 Nov 46	18 Dec 46
VS <u>S Bærfield</u> (APA-33)	3 A.9 46	4 Aug 4b	B Ang th	Pearl Harbor Jen Francisco Pugei Sound Augusi 1946	Puget Sound	7 Dec 46	10 F 46 A 1
U <u>\$5 Regor</u> (APO.127)	<b>d</b> ⊧ gu≯ E			Pearl Harbor B Aug 46	San Otegu	30 Sep 46	25 Jan 47
U <u>ŚŚ Benavolence</u> (AM.13)	31 QuA 22	J6 Jug 46	29 Aug 16	Pearl Harbor San Iran(1500 8 Sep 46	San Francisco	24 Sup té	5 <b>1</b> 917
<u>uss Benar</u> (APA-237)	31 Quá 62	24 Aug 46	29 king 48	Pearl Harbor San Pedra 10 Sep 46	San ùiega	24 Jan 4/	1 fre 41

Table 15. CROSSROADS support ships and decontamination locations (continued).

JJJ 16     Pearl Harbor     Mat required       JJJ 16     6 Aug 46     Marbor     San Francisco     19 Pec 46       Aug 46     21 Aug 46     San Francisco     19 Pec 46       JU 145     Pearl Harbor     San Francisco     19 Pec 46       JU 145     Pearl Harbor     San Francisco     19 Pec 46       Ju 145     Pearl Harbor     Aut 46     23 Sep 46       Sep 46     Pearl Harbor     Mat 1sco     20 Nav 46       Sep 46     Pearl Harbor     San Francisco     20 Nav 46       Aug 46     25 Aug 46     Pearl Harbor     Unknown       Aug 46     25 Aug 46     Pearl Harbor     Unknown       Aug 46     25 Aug 46     San Francisco     19 Dec 4b       Aug 46     25 Aug 46     San Francisco     10 Nnown       Aug 46     28 Aug 46     San Francisco     19 Dec 4b       Aug 46     28 Aug 46     San Francisco     10 Nnown       Aug 48     28 Aug 46     San Francisco     19 Jan 41       Aug 48     28 Aug 46     San Francisco     13 Jan 41       Aug 48     28 Aug 46     San Francisco     13 Jan 41       Aug 48     28 Aug 46     San Francisco     10 Nnown       Aug 48     28 Aug 46     San Francisco     10 Nnown	Vessel	Bistel Gepärture	Kwaja)eln Arriva)	Kwajale;a Departure	Upitipation and Arriva:	Decontamination tocation	Operations? Clearance	F hagl C léárậntụ
1     10 Aug 46     Pearl Habor San Francisco     19 Dec 46     21 San Francisco       21 Aug 46     21 Aug 46     21 Aug 46     23 Sep 46     21 San Francisco     23 Sep 46     23 4 Aug 46       21 Sup 46     28 Sap 46     30 Sep 46     74 Aug 46     23 Aug 46     23 Aug 46     20 4 Aug 46       21 Sup 46     28 Aug 46     20 Sep 46     74 Aug 46     23 Aug 46     24	<u>55</u> Alte <u>e 416ge</u>   AGC-2 à	3) LL 06		     	Pearl Harder 6 Aug 46	Mot required		By 22 Nov 16
71 Jui 46       73 Jui 46       Pearl Harbor       Aug 46       23 Sep 46       20 Nov 46	SS "Bott <u>ivea</u> u l <b>ap</b> k.235)	90 Yng 90			Pear) Harbor San Francisco 21 Aug 45	San Francisco	19 Dec 46	27 Dec 46
21 Sep 46     28 Sep 46     30 Sep 46     Pearl Harbor     San Franchico     20 hav 46     20 hav 46     20       1     24 Aug 46     25 Aug 46     Pearl Harbor     Vinhoun     By       5     Aug 46     25 Aug 46     Pearl Harbor     Vinhoun     By       23 Aug 46     24 Aug 46     Pearl Harbor     Vinhoun     By       23 Aug 46     24 Aug 46     Pearl Harbor     San Freego     Vinhoun     By       23 Aug 46     24 Aug 46     Pearl Harbor     San Freego     San Freego     Vinhoun     By       23 Aug 46     24 Aug 46     Pearl Harbor     San Freego     San Freego     San Freego     Vinhoun     By       23 Aug 46     25 Jul 46     28 Jul 46     Pearl Harbor     Mot required     Unhoun     By       23 Aug 46     24 Aug 46     Pearl Harbor     Mot required     Unhoun     By       23 Aug 46     24 Aug 46     San Unego     Mot required     Unhoun     By       23 Aug 46     24 Aug 46     San Unego     Mot required     Unhoun     By       24 Aug 46     24 Aug 46     San Freezo     San Freezo     Vinhoun     By       23 Aug 46     24 Aug 46     San Freezo     San Freezo     Vinhoun     By       24 Aug 46<	5 <u>5 800011100 144 9</u> 5				Pearl Harbor 4 Aug 46	Mat required	27 Sep 46	27 Sep 46
7     24 Aug 46     25 Aug 46     Linknown     Pearl Harbor     Pearl Harbor     Pearl Harbor     Pearl Harbor     Unknown     By       5 Aug 46     5 Aug 46     23 Aug 46     24 N Pearlo     Natron     Karfolk     Unknown     By       23 Aug 46     23 Aug 46     24 N Pearlo     5 An Francisco     16 Dec 4b     21       23 Aug 46     24 N 44     5 An Francisco     16 Dec 4b     21       23 Aug 46     24 N 46     24 N 1 46     5 An Francisco     16 Dec 4b     21       23 Aug 46     23 Aug 46     28 Aug 46     7 San Francisco     19 Aun 40     39       24 Aug 46     24 Aug 46     5 Aug 46     5 An Francisco     13 Jan 40     20       23 Aug 46     24 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46       23 Aug 46     24 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46       23 Aug 46     24 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     4 Aug 46       23 Aug 46     24 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     4 Aug 46       23 Aug 46     24 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     4 Aug 46       28 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     5 Aug 46     4 Aug 46 <td>55 <u>Bowd</u>ttere (AES-A1<sup>b</sup></td> <td></td> <td>28 Sap 46</td> <td>30 Šep 46</td> <td>Pearl Karbor 8 Oct 45</td> <td>San Francisco</td> <td>20 May 46</td> <td>20 Nov 16</td>	55 <u>Bowd</u> ttere (AES-A1 <sup>b</sup>		28 Sap 46	30 Šep 46	Pearl Karbor 8 Oct 45	San Francisco	20 May 46	20 Nov 16
23 Aug 46       24 Aug 46       29 Aug 46       Pearl Harbor       54n Dregod       54n francisco       16 Dec 4b         10-8351 <sup>4</sup> 75 2ul 46       75 Jul 46       28 Jul 46       28 Jul 46       10 Not required       Unknown         10-8351 <sup>4</sup> 75 Jul 46       75 Jul 46       28 Jul 46       28 Jul 46       10 Not required       Unknown         76 Aug 4b       73 Jug 46       75 Sur Urego       8 Aug 46       7 sep 4b       Sur Francisco       13 Jan 47         73 Jug 46       74 Jug 46       8 Aug 46       7 sep 46       9 Aug 46       9 Jac 46       3 Jac 46         73 Jug 46       74 Jug 46       74 Jug 46       9 Aug 46       9 Aug 46       9 Jac 46       3 Jac 46         73 Jug 46       74 Jug 46       74 Jug 46       8 Aug 46       9 Aug 46       9 Aug 46       9 Jac 46         8 Aug 46       74 Jug 46       8 Pearl Harbur       Pearl Harbur       9 Jac 46       17 Sep 46         8 Aug 46       30 Aug 46       5 Sep 48       Pearl Harbur       10 Augelos       10 Aug         8 Aug 46       5 Sep 48       Pearl Harbur       Pearl Harbur       10 Aug       10 Aug         8 Aug 46       5 Sep 48       Pearl Harbur       10 Aug       10 Aug       10 Aug	<u>506, 3rametu</u> r (MASI - 392) <u>55, </u> Buri <u>eson</u> (APA 62)	24 Aug 46 5 Aug 46	25 Aug 16	lu kro∎n	Prés I Hérbor <sup>e</sup> Pres I Herbor Sen Preso 22 Aug 45	Pearl Karbor Karfolk	Unknown Unknown	8y 22 kov 46 8y 34 041 46
ID-B351 <sup>4</sup> 75     2w1     46     28     4w1     46     54m     UNege     4mg     46       San     UNege     9     Aug     46     54m     UNege     9     13     Jan     47       76     Aug     46     7     54p     4b     6u37     San     EndFrancisce     13     Jan     47       76     Aug     46     7     54p     4b     6u37     San     EndFrancisce     13     Jan     47       73     Aug     46     74     46     Fearit Harbor     Purpet Sound     31     Jac     46       73     Aug     46     74     46     Fearit Harbor     Purpet Sound     31     Jac     46       73     Aug     46     74     46     Fearit Harbor     Purpet     46       73     Aug     46     74     46     Fearit Harbor     Purpet     46       78     Aug     46     55p     46     Fearit Harbor     Putroen     Putroen       78     Aug     46     55p     46     Fearit Harbor     Putroen     Fearit Harbor     Putroen       78     Aug     46     55p     46     Fearit Harbor <td><u>55 Cebu</u> (ARG-6]</td> <td></td> <td>at Aug 46</td> <td>29 Aug 46</td> <td>Petri Karbor San Dirgo<sup>c</sup></td> <td>SAN Francisco</td> <td>lt Dec €b</td> <td>21 Dec 46</td>	<u>55 Cebu</u> (ARG-6]		at Aug 46	29 Aug 46	Petri Karbor San Dirgo <sup>c</sup>	SAN Francisco	lt Dec €b	21 Dec 46
76 Aug 4b     28 Aug 4b     7 Sep 4b     Guare     San Francisco     13 Jan 47       73 Aug 4b     24 Aug 4b     24 Aug 4b     Pearl Harbor     Pupet Sound     31 Jec 4b       73 Aug 4b     24 Aug 4b     24 Aug 4b     Pearl Harbor     Pupet Sound     31 Jec 4b       73 Aug 4b     24 Aug 4b     24 Aug 4b     Pearl Harbor     Pupet Sound     31 Jec 4b       28 Aug 4b     30 Aug 4b     16 Sep 4b     Pearl Harbor     Ditroon       28 Aug 4b     30 Aug 4b     15 Sep 4b     Pearl Harbor     Ditroon       28 Aug 4b     30 Aug 4b     5 Sep 4b     Pearl Harbor     Los Angelos     Enhorn       28 Aug 4b     30 Aug 4b     5 Sep 4b     Pearl Harbor     Los Angelos     Enhorn	<u>55 Char</u> les <u>2. Ca</u> c <sup>yl</sup> (ND-835  <sup>4</sup>		75 Jul 46	94 (M) 82	Pear? Ka≂bor San Ulego 9 Aug 66	Not required	վուրեր	8y 22 Nav 116
28 Aug 45 30 Auy 4b !6 Sep 45 Pearl Harbur Pearl Harbur Unknown 3 Dct 45 28 Auy 45 30 Aug 46 5 Sep 4b Pearl Harbor Los Angelos Unhnown 30 Francisco 32 Oct 45	55 <u>Chirlasdu</u> (ATF-83) <u>55 (</u> hir <u>aski</u> (A0 54)	26 Aug 46 23 Aug 46	28 Aug 46 24 Aug 46	7 Sep 46 24 Aug 46	Guar Peari Karbor San Francisco I reare	San Francisco Purget Sound	13 Jan 47 3' Jec 46	)8 Jan 4) 4 Jan 47
žB Auy 46 βO Aug 46 5 Sep 4b Peeri Marbor Los Angelos (Introen San Francisco 22 Oci 46	<u>55 Chovanor</u> (ATF.130)		30 Auy 46	i6 Sep 46	Pearl Harbur 3 Dct 46	Pearl Hàrbņr	טוירישיט	i teb dr
	<u>55 (18mp</u> 1005-33) 		30 Aug 96	5 Sep 4b	Pedri Narbor San Francisco 22 Oci 46	Los Angelos	nanu)	By 22 Nov 46

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Table 15. CR055R0ADS support ships and decontamination locations frontinued

180

	SOSSROADS SI	upport sh	ips and d	Table 15. CROSSR0ADS support ships and decontamination locations (continued).	locations (cor	nt (nued).	
""""""""""""""""""""""""""""""""""""""	BYKIN' BYKIN' Departura	Kuataletn Arrival	leparture	Destination Destination and Arrival	Decontamination Location	Derational Clearance	
05 <u>5 Ceasters Harhar</u> 146-34;	15 Aug 46	le Aug 46	 17 Aug 66	Pear' Hardor San Olego	Los Angeles	) Uec 16	41 200 01
L <u>\$5</u> C <u>onverver</u> IARS-39	S Sep 4b	7 Sep 46	7 cp 45 5 6p 45	Wake Island Pearl Harbon 22 Feb 42	Pedrl Harbor	( ) (P) (	1 May 47
US\$ (Concel 4456-9)	4 Seo 46	b Sep Ab	11 Sep 46	Pearl Harbor 22 Sep 46	Sàn Diego	10 346 41	t∎ n¢t 8¦
US <u>S (reen</u> (∦≷L-L')	21 Aug 46	Ars 46 23 Arg 46 11 Sep 46	11 Sep 46	Pearl Harbor San Pedro	Lns Ange:es	23 Jen 4)	1 Frb 47
<u>155 Cumber Jane Sou</u> nd (14.)))	1 Aug 45			San Pedro	tas Angries	3 Dec 46	13 Opc 46
<u>155 Surrent</u> (A85-22)	an boy sz	21 Au <b>g</b> to	2 Jec 46	Pearl karbor 18 Dec 46	Pearl Karper	6 feb al	1 feb 4/
il <u>55 De'11e</u> er (A95 201	90 97 5ry 32	22 A. 9 15	8 Sep 46	Pear) Harbor 23 Sep 46	ŞAN Trànçlgça	20 D+r 46	27 Dec 46
(11-0); • I <u>nic</u> 301	26. Aug 16	du guy gi ya du guy	9 Svp 46	Pearl Marbor San fràncisco 22 Sep 46	San francisco	98 JOD 2	By 22 Nov 46
U <u>SS Outton</u> [AGS-R;	:4 Sep 46	<b>Sen e</b> t ]5 Sep 45 25 Sep 46	25 Sep 46	Pearl Karbor 4 Oct 46	Los Angries	18 Dec 45	10 Jan 47
169-04: samers) 5 <u>57</u>	24 Aug 46	24 Jug 46 75 Jug 46 <sup>4</sup> 7 Sep 46	J Sep 46	San francisco 20 Sep 46	SAN Francisco	3 Dec 46	<b>Илк Рома</b>
1995 - Ettan (AN 194	77 Aug 46	71 Aug 46 29 Aug 46"	2 Sep 46	Pearl Marbur 12 Sep 46	Pugel Sound	NR Dec AS	21 0+4 46
1 <u>(51-10)</u> <u>11-10</u>	d Sep d6	94 aas s	9 Sep 46	Pear) Harbor 14 Sep 45	Lns Ançeles	23 Jec 46	27 Orr 46
<u>.455 ř]_sy</u> er (00. 368)	4 Sep 46	5 Seg 46	9 Sep 46	Pedri Narbor Ve Sep eb	Petr' haroor	by 27 Nov 46	13 Dec 46
	b Aug Cb	26 Aug 46	28 Jug 46	Poerl Harbor San Franchsco	San francisco	24 Oer 45	10 Jan 41
Lavre -		   :	l i l	)       		<b>ļ</b>	

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181

Vessol	Bik'n1 Departure	Kuajulein Arrival	Kesjaleto Departure	Questination and Arrival	Decontéminetion Locacion	Operational Clearance	fln¢] Clear≩nce
<u> </u>		28 Ju <sup>2</sup> 46 29 Jul 46	30 Jul 46	frari Karbor San Peóro	Not required	Unk norm	By 22 Nov 66
<u>USS Seurge Clymer</u> (APA-21)	26 Aug 46			Prari Harbor San Petro 3 Sep 46	San Dlego	By 22 Hav 46	) teo 42
<u>(1-1-1-1)</u> ) (1-1-1-1) (1-2-1-1)	gy bry se	26 Aug 46	2 Sep 46	ûbari Karbor I Sep 46	kos Angeles	() 41 B	10 Jan 47
11-05841 <u>44058 57</u>	30 das 5	3 Sep 46	10 Sep 46	Pearl Harbor Ib Sep 46	Pearl Harbor Lot Angrici	9 Jan 47	19 Jan 47
<u>155 Haven</u> (AH.12)	25 Aug 46	26 hug t6	10 0c1 46	Pearl Harbor 15 Oct 46	tos Ingeles	14 Teb 43	Unknown
<u> 155 Henrico</u> (APA-45)	gy bny g;			Pearl Harbor San Iranchurg 21 Aug 46	Sar francisco	(† UTE BZ	1 fro 47
<u>USS Mevarcha</u> (AKS.13)	23 Yul 16	24 hug 46	31 Aug 46	Pearl Harbor V2 Sep 46	Pear! Herbor	28 Dec 46	ft nel t
101-2017 (ADD 101-101-101-101-101-101-101-101-101-101	20 Aug 16			Peerl Harbor 1 Sep 46	SAN FRANCISCO	13 Nov 46	13 Mov 45
<u> (8-10) (81124)</u>	20 Aug 45			Pearl Mardor J Sep 46	SAN FERNEISCO	75 Oct 46	72 Mar 45
<u>[[5\$_3/ngranam</u> [CD-694]	i3 Aug 46			Pearl Harber S4n Uirgo	ouget Scumd	13 Nov 46	2) Mar 46
<u>USS Renneth Wh'ting</u> (AV-14)	14 Jug 46			Pearl Harbor 19 Aug 46	los Angeles	1] 3ec 46	2) Dec 46
<u> </u>	lî Aug (6			Pearl Harbor San Otego 22 Au <b>g 46</b>	SAN Francisco	7 Nov 46	18 Dec 46
(1)11)121	22 Aug 46	22 Aug 46 23 Aug 46 11 Sep 46	)1 Sep 46	Бuðт	Guan/Martanas	Սոերեսի	7 Nar 42

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CROSSRUADS support ships and decontamination locations [continued]. fable 15.

Yesse)	₿1K1n) Ĵepy-ture	Ruejaletn Ar-1vel	Kutjaletn Ceptrture	Devilorion and Arrival	Opconientian .ocatlo*	Operational Ciearance	fine) Clearance
LC1113-1062	25 Aug 46	22 Aug 46 23 Aug 46 21 Dct 46	:1 Det 46	Suum Peur 1 Har Dor	Pear 1 Hirbor	dinknow m	8r 4 Jan 41
140,-C112);	4r Bry 22	25 hug 45 23 Aug 22	9 5eo 46	Guuna 16 Sep 46	uprg	24 Feb 4T	Unknown
: C117.)-109*	9 <b>7 604 5</b> 2	25 tug 46 26 Aug 46	9 500 06	61.2™ 16 \$#D 46	merd	Unknown	11 Dec 464
<mark>655 .lmestore</mark>  ]X.  <b>38</b> ) <sup>D</sup>		ls der db	e Sep 46	Pear) Mw/20- 23 5+6 40	Wot regulred	unkoen	8y 22 Nov 16
155 TOUL (00-) LD	4 <b>4 6</b> 14 DI			Presi Herbor Sen Diego 22 mug 46	031130P14 CBS	6 Kov 45	85 4 Jar ~942
<u>965 - 151 - 386</u>	25 tug 46	25 tug 45 26 Aug 46	Unknown	Laroline Islands	San Francisco	5 Dec 45	13 Dec 46
<u>19-1918 19</u> 18	91 GUA 65	29 YNG 46 24 4NG 42	94 5M ((	Peerl Herbor Port Numb <del>rae</del> 5 Oct 46	Gallandiyon	21 Ngu 46	22 Nev 46
105-151-35D	24 kug 46	25 Jug 16	2 Sep 46	Pearl Harbor 12 Sep 45	5an Francisco	6 Gec 46	40 Jec 40
4 <u>5111111</u> 0	25 JUL 46	25 241 46 27 Int 46	ap Gny 6	Peerl Harbor 30 Aug 48	Not required	Unknown	\$1 25 Nov 15
<u> 455 451-691</u>	91 Aug 16	22 Aug 45 23 Aug 46 31 Aug 46	97 Yuç 46	Pearl Hirbo: 10 Sep 46	GJT Francisco	13 Gec 46	Z3 Dec 4b
4 <u>55.151.38</u> 90	98 LMC 52	25 JUT 46 9 Aug 46 <sup>6</sup>	91 gul f	Peerl Harbor 20 Aug 450	Noi required	19 Xov 46	22 Nov 45
425 <u>Manuar</u> (4460-2)4	4 5eo 46	6 Sep 46	a Sep 16	Petri Harbor 19 Sep tõ <sup>d</sup>	Los kngeles	1 Jur 41	Ünkn gem

Table 15. CROSSR0ADS support ships and decontamination locations (continued).

Moter:

<sup>4</sup>Inferted from various sources.

<sup>0</sup>5%D not present at Bik'of for sufficient meriod after BAKÉA test to be radiologically suspect

<sup>c</sup> Fron (newtat.

Shot BATER only.

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(E69-CC1 <u>91E0K SSI</u>	Departure	PAL 214	Departure	Dext'nallon And Arrive:	Decontamination LorAtion	Clearance Clearance	Clearance
	4 Fry 01	   		Pearl Hatbor	San Francisco	34 VUV 46	11 prc 46
				San Diego			
				22 AUQ 45			
USS <u>Mount McK1-let</u> (AGC F)	96 put cc			Pearl Harbor 16 Aug 46	5ar D1ego	70 Dec 45	[] uff 62
(iD, iIA) <u>eanna s</u> i	28 Aug 46 30 Aug 46	30 Aug 46	2 5 4 A 4 6	P∎ār) A≩rbar	San Francisco	18 Hov 46	April 194)
U <u>SS Mewaan</u> (	4 Aug			Pearl Harbo 9 Aug 46	San Diego	70 net Li	75 JAC 25
<u> 155 0' 8r 1en</u> 103-7251	9 <b>,</b> ény 8			Pearl Harhar 15 Aug 46	San Françisco	6 Nav 46	19 Dec 46
<u>(55 0neots</u> 1 <b>nu</b> -85)	76 Aug 46	29 Aug 46	6 Sep 46	Gudar 13 Sep 46	VQ&G) Hickor	11 Dec 46	Unk nown
<u>155 Or</u> ca (Ay <sup>4</sup> 49)	<b>9</b> ₽ Øn¥ 2.	13 Aug 46	14 449 46	Gudm	Pres Harbor	VI Jee 46	23 Dec 45
<u>105 011146 1466-101;</u>	de gua dó			Port Hueno <b>ne</b> 14 Aug 46	Peur L'Harbor	13 Sep 46	13 Sep 46
<u> 1455, Pajmara</u> (#45(1 -0)	5 Sep 46	å Sep 46	11 Sep 4b	Pearl Harbor Sam Francisco 9 Oct 45	San Francisco	By 22 Nov a	8y 22 Nov 46 8y 4 Jun 47
<u>858 Panamini INGC-</u> )}8	9) INC 75	31 Inc 02	29 Jul 46	Hanolulu San francisco 12 Nug 46	kot required	22 Ngv 46	22 Nge 46
PGM -23	9 <b>0 6</b> 0 4 52	26 Aug 46	9 Sep 46	Pearl Harbor 16 Sep 46	Pear) Harbor	Unknown	Unk n bury
P GM - 3 A	25 Aug 46	25 Aug 46 26 Aug 46	9 Sep 46	Pearl karbur 16 Sep 46	Pearl Karbor	13 feb 4/	ûecommissioned 13 Mar 47
54- <b>N</b> Ja	-	0 Aug 46 11 Aug 46	12 Aug Ab	Guah 17 Aug 46	New Orleans	עיירעייע	20 Muy 47
wete: Vote: <sup>4</sup> Snip hat wresent at Rikini far sufficient period after BAKER test to be radialogically suspect.		arriod after	BAKER test	to be radialistic			
						1 cant	լ նուէ \ոլլով]

CROSSROADS support ships and decontamination locations (continued). Table 35.

	11 Aug 46 31 Aug 46 11 Aug 46		And Arrive	Location	C htdr ante	C)edrance
10 Aug 16 31 Aug 16 23 Aug 16 23 Aug 16 23 Aug 16	93 6n4 93 6n4	12 Aug 46	Guam 17 Aug 46	Kew Orleans	Jukoren	28 Nay 41
31 6n V 01 31 6n 6: 31 6n 6: 31 6n 6:	97 6n4	12 Aug 46	Guam. 17 Aug 46	Pearl Harbor	17 Jen 47	25 Jan 47
23 July 16 29 July 16 29 July 20		12 Aug 46	биат 1) Аку 46	Ph111p1n55	10 Oct €6	10 Oct 46
97 5r7 5:	24 409 46	3 Snp 46	Pear) Harbor 12 Sep 46	Los Angles	Zb Dec 4b	4 JAn 47
10 h 10	97 5°4 02	20 Avg 46	Pedri Hirbor 29 Aug 46	Puget Sound	29 Nov 46	25 Jan 47
0+ fnv 22	30 Aug 16	) 5ep 4b	Ppdr1 Harjor	tos Angeles	8 Jec 16	() UAU 40
<u>USS Presque Isle</u> IAPB 441 19 Aug 46 20	20 Yuy tb	2 Sep 46	РгдГ] Нагрог 17 5ер 46	los Angelça	12 Dec 46	21 Dec 46
<u>455 (uartz</u> [ r.)50} 22 Aug 46 23	73 Yug 46	3 Sep 46	Pearl Marbor 15 Sep 46	Puget Sqund	12 Dec 46	\3 Dec 46
USS Recianzier (ARS 42) I Sep 46 3	3 \$ep 46	6 Sep 46	Pearl Harbor 25 Sep 46	Los Angeles	24 Dec 46	By 4 Jan 47
U\$\$ Rebert K. Kuntingt <u>o</u> n (D0-781) °D Aug 46			Pearl Matbur San D1rgo 21 Aug 46	Fuget Sound	19 Nov 46	1 Jan 47
<u>USS BockDridue</u> (ADA 228) 21 Aug 46 24	24 Aug 46	39 Bny 62	Pearl Harbor San Francisco 12 Sep 46	Sái Francisco.	6 Der 46	13 Ĝec 46
<u>155 RackInghan</u> (APA 229) - 26 Aug 46 25	25 Aug 46	29 Aug 46	Pedri Herbar San irancisco 12 Sep 45	San Francisco	1 Dec 46	19 Dec ab
des Restrict i APA 230   19 Aug 46			Pearl Hirbor Port Huencenc 13 Sep 46	San trancisco	11 Dec 46	27 Bec 4b

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Vesse)	Bikini Ceparture	Kulaletn Arrival	Kwajz)alt Departure	Destination and Arrival	Becontamination Location	Operational Clearance	final Clearance
us <mark>s Rolette</mark> (AkA-99;	76 Aug 46	 		Enewtak Part Hurnene 13 Sep 46	San Ölegü	24 040 82	1 Feb (7
<u>111 (11) - 1146, 541</u>	4 4 ag			Pear 1 Harbor 9 Aug 46	San D1ego	28 Jan 47	l feb 4J
<u>155 Satut Crole JAPA 221</u>	2 Aug 46			Pearl Harbor Porl Hyenche	San Diego	22 Nov 46	IC Jan 11
<u>155 Şiri Mirovi (+5)-75)</u>	25 Aug 46	91 Gny 92	30 Aug 46	Poarl Harbor 6 Sep 45	San Francisco	24 0c1 46	18 Jan 07
US <u>S Savern</u> (AC-61) <sup>4</sup>	24 Aug 46			Pearl Harbor	Las Angeles	Unknown	3 Nov 46
<u>USS Shekamaton</u> IAM-88)	21 Aug 46	28 Aug 46	6 Sep 46	նսձա	Pearl Harbor	12 Dec 46	I lan 17
<mark>USS Shangri-t⊿</mark> (CV-381 <sup>4</sup>	49 [n] 44	25 Jul 46	28 Jul 46	Pear I Harbor Sin Diego	Rat required	University	By 22 Nov 46
USS_Steux_IATE.rs)	25 hup 46	26 kug 46	3 Sep 46	Pearl Hacbor	Los Angeles	78 Yoy 46	4 Dec 46
<u>USŞ Sphitnu</u> (ARL-24)	19 Aug 16	30 Aug 46	14 Dec 46	Wake Island Pearl Harbor	Los Angeles	14 1-6 47	23 Apr 47
<u>454</u> Sunsack (A4-80)	30 Avg 46	) ŝop 46	2 5ep 46	Pearl Narbor 12 Sep 46	Puget Sound	12 Dec 46	13 Dec 46
<u>USS S<u>y</u>lvania (AKA-ek)</u>	25 Åug 46	26 Aug 46	5) 4nd 19	Pearl Harbor 7 Sep 46	Puget Saund	] Dec 46	UNCOUNT
<u>USS Telamon</u> (ARB B) <sup>D</sup>	\$∎ <b>b</b> n⊌ 5.			Pearl Harbor San Tranctsco 7 Sep 46	loi Argelei	12 Dec 46	21 Dec 46
us <u>s Tampigear</u> (A0G.)15 <sup>C</sup> <u>USS Turner</u> (A0.634) <sup>0</sup>	91 Eny 12 91 CTC 52	22 Aug 46	5 5ep 46	Редг] Магрог Феаг! Магног 30 Ама Ав	tos Angeles Not required	31 Berc 46 Unknown	4 Jan 47 87 22 40× 46

<sup>d</sup>Ship hat present al Bikini for sufficient period after BMKEH test to be rodiologically suspect. <sup>D</sup>Shot BMKER only. <sup>C</sup>Shot ABLE only.

(continued)

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Yessel	Bitint Departure	Kuaja letn Ar fual	Ketj≴letn Oepèrlur¢	Destination and Arrival	Decontanination docrational Location Clearance	Uperational Clearance	( hng) Clearance
185 <b>Naike</b> (00 223)	de gut di			Pearl Narbor San Diego 22 Aug 46	San Francisco	Unknoen	23 Det 45
<u>USS Menutenge (ATF-118)</u>	18 Aug 46	Aug 46 19 Aug 46 28 Aug 46	28 Aug 46	Pearl Marbor 5 Sep 46	SAN FENCISED	91 AON EL	13 Nov 46
<u>UŚŚ Whariton Ik</u> P.J)	57 Aug 45	Aug 46 26 Aug 46 28 Aug 46	28 Aug 46	San Frencisco After 3 Sep 46	Puget Sound	10 Feb 47	Unknown
<u>uss wiaqear</u> (Ask I)	5 Sep 46	šep to <sup>3</sup> Sej 46 il Sep 46	il Sep dá	Pedri Harbor 22 Sep 46	San franchigo	13 Dec 46	10 Jar 47
US <u>S wildes</u> (Au-2)	lg Aug té	Aug 46 20 Aug 46 28 Aug 46	28 Aug 46	Pearl Harbo 9 Sep 46	Puget Sound	9 Jan 47	TD Jac 47
MS 354	14 Sey 46	Sey 46 15 Sep 46 21 Oct 46	21 Oct 15	Guan/Subic Bay	Guám/Mar Lanas	20 Dec 46	10 Feb 47
BSE-SMA	14 Sep 46	Sep 46 15 Sep 46 21 Sep 46	21 Sep 46	Guam/Subir Bay	GuanvMar hanas	20 Dec 46	10 feb 47
YMS-413	14 SPP 45	Sep 45 15 Sep 45 21 0c1 45	21 Oct 46	Guan/Subic Bay	Sugn/Hac hanas	20 Dec 46	10 Feb 47
YMS.463	14 Sep 46	15 Sep 46	Sep 46 15 Sep 46 2' 051 46	GUAR/Subsc Bay	Suam/Mar hanas	20 Dec 46	10 Feb 47

CROSSROADS support ships and decontamination locations (continued). Table 15.

# JOINT TASK FORCE | STAFF

The Joint Chiefs of Staff (JCS) directive establishing JTF 1 stated that it would be organized with adequate representation of land, sea, and air forces, and that it would include civilian scientists. Implementation of adequate representation reflected the dominant naval flavor of the operation. The JTF 1 roster of officers dated 1 July 1946 shows 501 Navy officers, 8 Marine Corps officers. 141 Army ground officers, and 21 Army Air Forces officers. Of the 501 Navy officers, 444 were assigned to various ships at Bikini. The remainder filled billets in other locations: 39 were in the JTF 1 rear echelon at Washington. D.C.: 1 each was at Pearl Harbor and Oak Ridge. Tennessee: and 16 were assigned to Kwajalein Atoll.

#### DISPATCH BOAT AND BOAT POOL

The Dispatch Boat and Boat Pool was designated Task Unit (TU) 1.8.3 (Dispatch Boat and Boat Pool) under Task Group (TC) 1.8 (Service Group). The mission of TU 1.8.3 was to provide dispatch and mail service. Interatoli freight and passenger service, and general boat pool services, e.g., ship-to-ship and ship-to-shore. Special boat operations were also a mission, which included operating a flag pool as required for use of distinguished persons and visiting flag and general officers and providing craft for radiological safety (radsafe) work and boats for the target array.

A large number of personnel, ships, and boats were assigned to 70 1.8.3. These totals varied throughout the operation as personnel were discharged from the naval service or transferred to other task force activities, and as boats were damaged or sunk, or released for special missions. Originally 313 personnel were assigned to operate and maintain the boat pool. By 10 June this number had been reduced to 228 due to discharges and transfers. Some replacements were obtained from TG 1.7 (Surface Patrol Group) and from new personnel arrivals. However, personnel deficiencies were never made up. The loss of personnel, as enlistments from World War II lapsed, continued to be a problem throughout CROSSROADS. For the most part, replacement personnel were untrained and great difficulty was experienced in keeping boats operating. For example, a maximum number of boats assigned to TU 1.8.3, 152, was reached on 19 June, By 31 July, a time of high boat pool need, only 93 boats were in operating condition.

Units assigned to TU 1.8.3 were two dock landing ships. USS San Marcos (LSD-25) and USS Gunston Hall (LSD-5), one self-propelled barracks ship. USS Presque Isle (APB-44), and a variety of small boats. The two LSOs provided boat maintenance facilities and along with the APB quartered and pessed boat pool personnel. A landing craft repair ship. USS Sphinx (ARL-24), from TG 1.8 also assisted in boat repairs. The number and types of boats assigned varied. On 19 June there were six motor gunboat patrol vessels (PCH-23, PCM-24, PCH-25, PCM-29, PGM-31, and PCM-32), used almost exclusively for by the Radiological Safety Group; four large infantry landing craft (LCI(L)-1062, LCI(L)-1067, and LCI(L)-1091 at Bikini and LCI(L)-977 at Kwajalein: 38 LCMs (mechanized landing craft): 34 LCVPs (vehicle and personnel landing craft): 44 LCP(R)s (ramped personnel landing craft): 1 LCP(L) (large personnel landing craft): 30 PPBs (24-foot boats): 3 PBs (45-foot boats); 1 LCC (control landing craft): and 1 MB (35-foot boat).

All ships and most of the boats of TU 1.8.3 cleared the lagoon for both tests. San Marcos and the six PGMs used for radiological monitoring soon after both shots were stationed about 12 nmi (22 km) from the lagoon entrance. The remainder of the task unit evacuated to Rongelap Atoll for shot BAKER (Refetence C.9.206, pp. VII-(A)-77 and VII-(F)-29 through VII-(F)-3)).

in order to meet pressing demands, the boat pool was augmented by boats and personnel from various ships and 7V 1.3.1 (Transport Unit) and 7C 1.2 (Target Vessel Group). Despite these arrangements, at no time during the course of the operation did the boat pool have sufficient operable boats to meet all requirements. The situation was very much aggravated by the damage, beaching, and sinking of 42 boats in the vicinity of Aomen Island during Queen Day (ABLE shot rehearsal) evacuation. The loss was caused by a combination of heavy Weather, inadequate moorings, and an LCT breaking loose and drifting through the boat moorings (Reference C.9.206, p. VII-(A)-79).

## DIVERS

Following both tests, experienced salvage and diving officers took teams of divers down to inspect wrecks and to obtain comprehensive descriptions of conditions encountered (Reference C.9,207, pp. VII-(I)-87-B and VII-(I)-75-B; Reference A.2, p. 75; Reference C.2.9). The ships sunk during the operation carried with them precisely the type of information CROSSROADS was set up to obtain, the type and degree of damage caused by a nuclear detonation. Divers communicated information to the surface and took many underwater photographs. The Technical Director requested services of divers to recover instrumentation from a number of target ships. These operations were carried out when it was radiologically safe. Diving operations included recovery of (Reference C.9.207, p. VII-(I)-83-B):

- Nine vertical stations
- Pressure-time recorders from UCG <u>Arkansas</u> (BB-33), <u>USS</u> <u>Sararoga</u> (CV-3), and <u>USS</u> Pilotfis: (SS-386)
- Two hydrophones.
- Disphragm gauge and 5-gallon (18.93-liter) cans attached to raft on <u>Nagato</u>
- Radiation intensity film on <u>Ackansas</u>, <u>Nagato</u>, <u>Saratoga</u>, <u>USS Apoqon</u> (SS-308), and <u>Pilotfish</u>
- Underwater pressure gauges on <u>USS Bracken</u> (APA-64) and <u>USS</u> <u>Briscoe</u> (APA-65)
- Bottom pressure recorders and possibly gamma meters at tached to a cable near the center of BAXER detonation site.

Divers from the submarine rescue vessel USS Coucal (ASR-8) reported on 2 August (eight days after shot BAKER) that it was moored over the target submarine USS <u>Skipjack</u> (SS-184) and ready to start diving operations as soon as radiological conditions permitted. Inspection dives in preparation to salvage Skipjack were done that day (Reference C.9.207. p. VII-(I)-75-B). In order to alert divers to radiation exposure levels, a long watertight Geiger tube was carried by them on dives when radiological conditions were uncertain. This instrument transmitted to a counter aboard the tending diving ship. When high radiation levels were detected, the crew on board communicated to the divers to stand clear (Reference A.2, p. 75).

# UNDERWATER DEMOLITION TEAM 3 (UDT-3)

In March, Los Alamos scientists decided that the analysis of a sample of water from the immediate vicinity of the nuclear detonation was essential if the tests were to be properly evaluated. After consideration of several proposals to accomplish this, it was finally decided to employ drone boats of the type used in World War II by Naval Combat Demolition Units in southern France. In April, the Drone Boat Unit was designated TO 1.1.3, composed of USS Begor (APU-127), Underwater Demolition Team Easy (later renamed UDT-3), 6 LCVP drone boats (with 2 boats in reserve), and control TBM-3Es from TG 1.6 (when assigned) stationed aboard USS Saidor (CVE-117). On 27 April. Begor reported that 7 officers and 51 enlisted men boarded for transfer from Port Hueneme to Bikini for UDT operations (Reference A.3, Begor, 27 April). It is assumed that this was the composition of UDT-3. UDT-3 personnel were responsible for operation and maintenance of the drone boats and provided airborne control officers for the TBM flights. The LCVP drones were directed to desired sample areas and. when an adequate Geiger reading was transmitted back to the controllers, a water sample was taken, Upon completion of the mission, each drone was directed back to Begor where it was washed down with hoses from Begor and boarded by a safety officer. After being declared safe, a UDT-3 boat crew took over and a radiochemist boarded to transfer the collected water samples.

Successful sample operations were carried out for both shots. On SAKER day, two LCVP drones were monitored by boarding parties and were found to be highly tadioactive. Water samples were left in the drones and were recovered 2-1/2 hours later (Reference C.9.207, p. VII-(R)-30). Forty 5-gallon (18.93-liter) water samples were collected on BakkEW day (Reference C.9.207, p. VII-(R)-39).

#### 53rd NAVAL CONSTRUCTION BATIALION (53rd NCB)

An advance contingent of the 53rd NCB (Seabees) arrived at Bikibi Atoll on 5 March 1946 aboard USS Saint Croix (APA-231) for an initial survey by Seabees to plan the construction of facilities for CROSSROADS. On 13 March, 550 personnel of the 53rd NCB arrived at Bikibi Atoll from Guam on USS Randall (APA-224). They were later transferred to <u>Saint Croix</u>, where most of the Seabees were berthed throughout the operation. On 14 March, USS LST-881 delivered 175 stevedores from Pearl Harbor who were to be responsible for handling cargo, assembling moorings for the target array, assisting in the installation of instruments, and assembling sonobuoys and life rafts. During CROSSROADS, the stevedores were berthed on <u>Saint Croix</u>. USS Ottawa (AKA-101) and USS Rolette (AKA-99). On 19 March, USS LST-817 arrived with 75 Seabees. On 20 March, <u>Rolette</u> and <u>Ottawa</u> brought 200 more Seabees from Port Huenome (Reference C.9.206, pp. VII~(A)-20 and VII~(A)-91). The maximum strength of the battalion from 20 March to mid-May was 1.005 (Reference C.9.205, p. VII-(A)-92(d)). Construction on Bikini Atoll was limited to that necessary for essential test instrumentation and recreational facilities. The structures built were instrument towers, radio beacons, magazines, photo reference crosses, observation towers, seismic buts, bombing targets, and a recreational area for 7,000 personnel. All of this was to be completed by 1 May 1946 (Reference C.9.206, pp. VII-(A)-2, VII-(A)-42, and VII-(A)-43).

Early in May. 200 men were released from the 53rd NCB. and an additional 522 were released early in June when all originally planned construction was essentially complete. Twenty-one officers were released late in May. They were released by six ensigns. By 19 June all remaining naval reserve personnel were released and replaced by regular enlisted personnel. During July, 6 officers and 240 enlisted men remained in the battalion to maintain installations at Bikini Atoll (Reference C.9.206, pp. VII-(A)-93 and VII-(A)-94).

For shot ABLE, the Seabees evacuated part of their construction equipment by LST. The equipment that remained ashore was not damaged by Test ABLE. For shot BAKER most of the equipment was left: again, there was no damage (Reference C.9.206, pp. VII-(A)-50 through VII-(A)-52).

On 3 August, the 53rd NCB was dissolved and personnel were transferred to Construction Battalion Detachment 1156 (CBD-1156), which was activated the same date, for the rollup phase at Bikini Atoll (Reference C.9.206, p. VII (A) 99).

The majority of the 53rd NCB had completed their construction tasks and departed Bikini before shot ABLE. Those who remained were evacuated from Bikini prior to both shots.

#### CONSTRUCTION BATTALION DEFACHMENT 1156

CBD-1156 was activated on 3 August 1946 when the 53rd NCB was dissolved. Two hundred forty enlisted men were transferred directly from the 53rd NCB to CBD-1156. Two officers were then assigned to take command (Reference C.9.206, p. VII-(A)-99). CBD-1156 prepared Bikini Atoli for rollup operations. The fleet recreation area was closed, dynamite disposed of, and security measures taken to protect equipment left behind. A complete survey and report on the conditions of Bikini Atoli was taken before its departure to Enewetak aboard <u>Rolette</u>. One ensign remained at Bikini and made reports on the condition of the equipment (Reference C. $\{1.13\}$ ). On 26 August, the battalion transferred from Bikini Atoli to Enewetak Atoli after closing off areas in the atoli. On 11 September, 30 Seables flew to Bikini from Enewetak to assist in the transpottation of usable and repairable equipment on board <u>USS LST-388</u>. This equipment went to Peari Harbor for further evaluations (Reference C.9.206, p. VII-(A)-99). The ensign then completed another survey and reported on the condition of the equipment left behind on 27 September (Reference C.11.13). It is unknown when CBD-1156 left Enewetak Atoli.

#### TRANSIENT SHIPS

Several transient ships visited Bikini Atoli during CROSSROADS. All of them were stores ships (AF) or attack transports (APA). These ships and their dates at Bikini Atoli are listed below:

<u>USS Pickaway</u> (APA-222) -- 2 July, 21 July <u>USS Chilton</u> (APA-38) -- 10-15 July <u>USS Graffias</u> (AF-28) -- 15-16 July and 21-23 July <u>USS Hyades</u> (AF-28) -- 19-22 August <u>USS Lavaca</u> (APA-180) - 23 August.

## NAVY AIR GROUP (TASK GROUP 1.6)

Composed of ships and aircraft. TG 1.6 was involved in a variety of support missions during CROSSROADS. Elements of the task group were operated from two aircraft carriers and from two island bases, Roi and Ebeye at Kwajalein. Table 16 gives TG 1.6 composition.

Task Unit 1.6.1 (Drone Carrier Unit)

This unit was based on U<u>SS Shangti-La</u> (CV-38). It was responsible for training personnel, preparing equipment for atomic bomb tests, conducting aircraft operations for drones engaged in collecting air and water samples in target areas on ABLE and BAKER days. It operated the carrier and plane guard destroyers as necessary to carry out air operations of embarked units (Chapter 4) (Reference C.9.206, p. VII-(8)-14).

Personnel and equipment of the Drone Carrier Unit (TU 1.6.14), the Drone Boat Control Unit (TU 1.6.15), and the Field Recovery Unit (TU 1.6.13) were transported overseas aboard <u>Shangri-La</u>. An extensive program of takeoffs and recoveries was initiated while en route from Rawaii to Roi Island. Kwajalein. The units arrived at Dyess Field, NAB Roi, on S June. Training was given en route in navigation, howing, fighter direction, general communications, and the ABLE day Air Operation Plan (Reference C.9.206, p. VII-(E)-118).

Practice for ABLE day using the drones occurred on 10. 20. and 24 June. The practices included all Navy and Army aircraft. For each of these joint rehearsals, 4 drone #6Fs, 16 control #6Fs, and 2 air-sea rescue TBMs were launched from <u>Shangri-La</u> near Orbit Point Tare (40 nmi [74 km] from the center of #1kini Ls]and). Orbit points for ABLE are summarized in Table 8. During each rehearsal, the carrier drones operated as follows (Reference C.9.206, pp. VII~(E)-119 and VII (E)-120):

- Four primary drone-control flights (Red. White. Blue. Yellow) of two F6Fs each were launched and rendezvoused over <u>Shangri-La</u> to await the launching of four F6F drones (Red, White. Blue. Yellow)
- As each of the four F6F drones were launched (each carrying a safety pilot for the rehearsals only). the corresponding color-coded flight of the primary drone-control aircraft assumed control of the aircraft and directed it to its station over Bikini Lagoon.
- Four secondary drone control flights (Red. White. Blue, Yellow) of two P6Fs each then took off and proceeded to their stations opposite the point where it was expected

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Task Unit 1.6.1 -- Drone Carrier Unit
  Task Unit 1.6.11 -- USS Shangri-La (CV-38)
  Task Unit 1.6.12 -- Commander Destroyer Division 5
  Destroyer Division 51
     USS_Turner (OD-834)
     USS Charles P. Cecil (DD-835)
  Task Unit 7.6.13 -- Field Recovery Unit (NA8 Roi)
 Task Unit 1.6.14 -- Carrier Drone Air Unit (detachment from Air Development
                      Squadron-2 (VX-2)
     26 F6F-3K drones
     31 F6F-S drone control planes
  Jask Unit 1.6.15 -- Drone Boat Control Air Unit<sup>d</sup>
      6 TBM-3E
Task Unit 1.6.2 -- Photographic Carrier Unit
  Task Unit 1.6.21 -- USS Saidor (CVE-112)
  Task Unit 3.6.22 -- Pholographic carrier plane guard destroyers
     USS Furse (DD-882)
     USS Newman K. Perry (DD-883)
  Task Unit 1.6.23 -- 5 F6F-5P photo aircraft
  Task Unit 1.6.24 -- 5 T8M-3P photo aircraft
  Task Unit 1.6.25 -- 4 HOS-1 helicopters
Task Unil 1.6.3 -- Seaplane Unit
  Task Unit 1.6.31 -- Naval Air Base (Ebeye)
 Task Unit 1.6.32 -- Patrol Seaplane Squadron 32 (VPB-32) (9 PBM-55)
 Task Unit 1.6.33 -- Air-Sea Rescue Squadron 4 (VH-4) (6 PBM-5s)
Task Unit 1.6.4 -- Seaplane Tender, Bikini
  Task Unit 1.6.41 -- USS Orca (AVP-49)
Note:
<sup>4</sup>Transferred to <u>Saldor</u> on 10 June.
Source: Reference C.9.205, p. VII-E-Appendix III.
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that the drones would be directed into the atomic cloud on ABLE day by the correspondingly color-coded primary control aircraft

- Each of the secondary drone-control flights then took control its drone after its passage through the area of the expected cloud column and guided it approximately 175 nml (324 km) to Roi Island, where the drones were landed by the Field Recovery Unit
- The primary control aircraft returned to the carrier, and the secondary control aircraft landed on Roi Island.

The drone unit was not successful in carrying out all the details of the plan for the first two rehearsals, but the Queen Day rehearsal was almost perfect (Reference C.9.206, p. VII (E)-120). The control aircraft were equipped with Geiger counters to enable the pilot to detect the presence of radiation.

SHOT ABLE. On 30 June at 1625 <u>Shangri-La</u>, accompanied by plane guard de stroyers <u>USS Turner</u> (DD-834) and <u>USS Charles P. Cocil</u> (DD-835), departed Roi Island to take station within 15 nmi (28 km) of reference Point Tare (bearing 135<sup>o</sup>T. 40 nmi [74 km] from the center of Bikini Island) (Reference C.9.206, p VII-(E)-162). Earlier, final inspection of alteraft and special equipment had been initiated. At 1005, the drone unit in <u>Shangri-La</u> began a deck checkout of each drone and drone-control aircraft and bench checkouts of all identification. friend or foe (IFF) equipment on them. In addition, all special equipment on the aircraft, such as Geiger-Mueller counters, air filters, cameras, and recording devices, was given final tests. By 2130 all aircraft to be launched the next morning for ABLE were on the deck ready to be launched (Reference C.9.206, p. VII-(E)-163).

Between 0714 and 0717 on 1 July, two F6Fs from each of the four primary drone-control flights took off from <u>Shanqri-La</u>. The eight primary control F6Fs rendezvoused over the carrier in position to intercept the drones. The Red, White, Blue and Yellow drones took off, in that order, between 0725 and 0745. The primary control flight established control over each airborne drone. By 0828 all drones were at their respective stations, bearing 312°T, 20 mai (37 km) from target center, flying at the following altitudes: Red at 28,000 feet (8.5 km), White at 20,000 feet (6.1 km), Blue at 15,000 feet (4.6 km), and Yellow at 10.000 feet (3.0 km). Meanwhile, the four secondary drone-control flights of two F6Fs each were launched between 0747 and 0750. By 0830 all were on station, bearing 135°T, 20 nmi (37 km) from the target center at altitudes corresponding to the drones and primary drone-control flights across the center of the target axis (Reference C.9.206, p. VII-(E)-167). Two air-sea rescue TBMs (Dagget-1 and Dagget-2) were launched at 0757 from Shangri-La and stood by over the carrier until 1159 (Reference C.9.206, pp. VII-(E)-167 and VII-(E)-168).

No problems in launching the drones or in controlling them to station occurred. However, after the Red drone arrived on station, a stuck alleron caused it to go out of control and it crashed in the sea at 0850. Consequently, the Red primary and secondary drone-control flights were ordered to return to base at 0900 (Reference C.9.206, pp. VII $\cdot$ (E)-167 and VII $\cdot$ (E)-168).

All pilots in the controlling planes had adjusted their darkened goggles to shield their eyes from the blinding flash of light at the instant of detonation. Since the pilots had expected a much stronger flash than actually occurred, they were momentarily unsure whether the burst had occurred on schedule. However, no serious delay resulted. The primary control flights commenced controlling the drones toward the cloud column, entering as follows: at 0906 the Yellow drone at 10.000 feet (3.0 km), at 0909 the White drone at 20.000 feet (6.1 km), and at 0910 the Blue drone at 15.000 feet (4.6 km). As the drones passed through the cloud column, the White drone increased altitude from 20,000 feet to 26,000 feet (6.1 to 7.9 km), probably due both to the strong upward currents within the cloud and to the White drone having a slight nose-up altitude when the primary drone-control flight released it. The secondary drone-control flights successfully completed the interceptions as follows: Yeilow at 0923. Blue at 0924, and White at 0953. The control aircraft tecaptured the White drone over Wotho Atoll and returned it to Rol without damage. All drones landed safely at Roi between 1028 and 1046, and all control aircraft returned to the base aboard Shangri-La or to Rol between 0957 and 1056 (Reference C.9.206, pp. VII- $(\underline{S})$ -1?1 and VII- $(\underline{S})$ -1?2). All 16 pilots ware film badges. and 16 were readable. The average exposure was  $0.02 \ R$  (gamma), with a maximum of 0.03 R (gakma).

Following completion of drone flight operations, radiological samples were removed from the F6F drones after they landed at Rol. Soon after, all other drone and drone-control already from  $\underline{Shangri-La}$  were flown to Rol Island where they were later checked and flight-tested. On 9 July one drone and its safety pilot were lost on a routine test flight off Rol Island when the drone, under the control of the field unit, rolled over at a very low altitude and spun into the sea (Reference C.9.206, p. VII-(E)-188).

Between 0910 and 0918 four drone boat control TBMs (Bucko-1. Bucko-2. Bucko-3, and Bucko-4) of TU 1.6.15 were launched from <u>Saidor</u>. Immediately after takeoff. Bucko-1 and Bucko-3 proceeded to their stations 5 nml (9.3 km) upwind from the drone boats Factory-1 and Factory-3. Bucko-2 and Bucko-4 stood by circling the carrier as replacements. When Bucko-1 reported a hydraulic leak shortly after takeoff. Bucko-2 replaced it. At 1015 Bucko-4 replaced Bucko-3. which had developed generator trouble. The TBMs remained about 5 nml (9.3 km) upwind from the drone boats. The TBMs controlled the drone boats' courses as they moved through the radioactive target area. The TBMs also reported on the levels of radiation in the area in which they were flying. Bucko-2 and Bucko-4 completed their missions and were out of the area by 1236 (Reference C.9.206, p. VII-(£)-172).

SHOT BAKER. The air operation plan for shot BAKER provided for the active use of only three drones with twelve control aircraft: Red drone at 14.000 (eet (4.3 km) at B+6 minutes. White drone at 9,000 feet (2.7 km) at B+10 minutes. and Blue drone at 5.000 feet (1.5 km) at B+12 minutes. The Yellow control flight remained in readiness as a replacement in case any control flights developed trouble. The primary drone-control aircraft were at Orbit Point Victor, bearing  $315^{\circ}T$ . 20 mml (37 km) from the target center. The secondary drone control aircraft were at Orbit Point Sugar, bearing  $135^{\circ}T$ . 20 nml (37) from target center (Reference C.9.206, p. VII-(E)-213). Some safety restrictions were relaxed since airborne radiation from the underwater shot would be less than for ABLE, and the control group was brought closer to the target area. One flight in each group was positioned to be in sight contact of the drone at all times. The amber shield over the cockpit greenhouse and the blue goggles were discarded (Reference C.9.206, p. VII-(E)-187). The White drone had been modified to include the installation of a Mitchell Camera, and a K-17 type aerial camera had been installed on the Red drone.

On 13 July all drones and drone-control airplanes were transported by barge from Roi to Shangri-La, which then proceeded to Sikini to participate in the first air rehearsal on 14 July. A second air rehearsal on 19 July was cancelled because of foul weather (Reference C.9.206, p. VJI-(£)-188).

At 1610 on 24 July, Shangri-La, accompanied by destroyers Tyrner and Cecil. left Roi Island to assume their positions 40 nmi (74 km) from the center of Bikin) Island (Reference C.9.206, p. VII-(E)-208), On 25 July at 0723, launching of the three F6F drones and twelve F6F drone-control aircraft began. By 0814, the three drone groups were on station. First the two F6Fs of each primary drone-control flight were launched. followed by the drones and the secondary drone control flights. All aircraft rendezvoused over Shangri La before proceeding to their assigned stations. At R-hour the primary drone-control Elights were orbiting with their drones at Orbit Point Victor, bearing 315°T. 20 nm1 (37 km) from the target center at the following altitudes: Red at 14,000 feet (4.3 km), White at 9,000 feet (2.7 km), and 8)ue at 5,000 feet (1.5 km). The secondary drone-control flights took up their positions on the opposite side of the target axis at Orbit Point Sugar, bearing 135°T, 20 nml (37 km) from the target center, at altitudes corresponding to the other elements of their respective groups (Reference C.9.206, pp. VII-(E)-212 and VII-(E)-213). Orbit point: for BAKER are summarized in Table 10 (Chapter 4).

The primary drone-control flights and the drones moved toward the target array after the detonation. The Red drone entered the cloud column at 0841 from 14.000 feet (4.3 km), the White drone at 0845 from 9,000 feet (2.7 km). and the Blue drone at 0847 from 5,000 [set (1.5 km). The secondary drone-control flight reported the drones at approximately the same altitudes as follows: Red at 0850. White at 0847. and Blue at 0849. Since the cloud of water and steam did not reach the altitude expected, the Red and White drones at the higher altitudes passed over the top of the cloud, and the Blue drone at 5,000 feet (1.5)km) flew through the upper portion of the column (Reference C.9.206, p. VII-(E)-216). Radioactivity was detected on the Blue drone only. Maximum reading was 7 R/24 hours (Reference C.7.6). All drones were quided to Rol Island and landed without damage between 0950 and 1006. All air filters, cameras, and other special installations operated satisfactorily except the camera installation in the Red drone (Reference C.9.206, p. VII (E)-217). All pilots wore film badges. The 12 badges averaged 0.05 R (gamma) and the maximum was 0.08 R (gamma).

At detonation, the four drone boat control TBMs (Bucko-1, Bucko-2, Bucko-3, and Bucko-4) were standing by aboard <u>Saidor</u> ready for launching. All four took off between 0846 and 0849, Bucko-2 and Bucko-4 stood by in the air over the carrier as replacements while Bucko-1 and Bucko-3 proceeded to a position upwind from drone boats Factory-1 and Factory-3. Remaining approximately 5 nml (9.3 km) upwind of the drone boats. Bucko-1 at 2.300 feet (701 meters) and Bucko-3 at 2.600 feet (792 meters) conned the courses of Factory-1 and Factory-3 by voice radio as the boats moved through the radioactive waters hear the target area (Reference C.9.206, pp. VII-(E)-217 and VII-(B)-219). Bucko-1 completed its conning assignment at 1055 and Bucko-3 at 1105. In the afternoon between 1508 and 1574, similar conning assignments were carried out by Bucko-2 and Bucko-4. Bucko-3 stood by in the air over <u>Saidor</u> as a replacement (Reference C.9.206, p. VII-(E)-218). The three F6F drones and half the control 41r craft landed at Rol after the test and radiological samples were removed. On 26 July, two drones were returned by barge to <u>Shangri-La</u>. The following day the remaining F6Fs were transferred to <u>Shangri-La</u>.

Task Unit 1.6.2 (Photographic Carrier Unit)

TU 1.6.2 was based on <u>Saidor</u>. Its mission was to train crews and prepare equipment for atomic bomb tests during ABLE and BAKER and:

- Conduct photographic operations
- Operate helicopter aircraft for radiological teconhaissance, photography, and photographic utility flights
- Conduct conning of drone boats
- Operate photographic carries and plane guard destroyers as necessary to carry out air operations of embarked units
- Provide pre- and postshot mapping and other photography.

The F6F photographic aircraft were equipped with cameras to provide stills, sonne-strip photos, and a limited amount of motion-picture coverage. Their primary duty was to obtain photographs of the target array just before the detonation. In addition, they were to make mosaics of the target area and strip photos of Bikini Beach before and after the tests (Reference C.9.206, p. VII-(E)-38). One F6F was to obtain motion pictures of the target array and cloud phenomenology after detonation.

Personnel and equipment of the 66F Photo Unit (TU 1.6.23), the TEM Photo Unit (TU 1.6.24), and the Helicopter Unit (TU 1.6.25) were transported overseas in <u>Saidor</u>. The Drone Boat Control Unit (TU 1.6.15) also joined the carrier on 10 June at Bikini (Reference C.9.206, p. VII-(E)-122). TU 1.6.23 had eight F6F and seven F6F 5P pilots. TU 1.6.24 had five TBM and five TBM-3E pilots (Reference C.9.206, p. VII-(C)-22).

After the photographic units arrived at Bikini, the training of the two photographic carrier units (TU 1.6.23 and TU 1.6.24) consisted primarily of three air rehearsals on 10, 20, and 24 June. In addition, they completed various preshot photographic assignments (Reference C.9.206, p. VII (E)-123).

At Bikini, the Helicopter Unit (TU 1.6.25) observed the target array and inspected target installations. Considerable difficulty was experienced in operating the HOS-1 helicopters. One helicopter was irreparably damaged on a test landing on 30 May and another force-landed in Bikini tagoon on 3 June (Reference C.9.206, pp. VII-(E)-123, and VII-(E)-124).

SHOT ABLE. The aircraft carrier was the first element of the group to begin moving to ASLE day stations. At 1400 on 30 June. <u>Saidor</u>. accompanied by destroyers <u>USS Furse</u> (DO-882) and <u>USS Newman K. Perry</u> (DD-883). left Bikini Lagoon for its position bearing 0<sup>o</sup>T. 40 mmi (74 km) from the center of Bikini Island (Point Auto) (Reference C.9.206. p. VII-(E)-162).

On I July between 0712 and 0715. six F6Fs (Queen flight of four and Sugar and Roger flights) were launched from <u>Saidor</u> to obtain still photographs of the Bikini target area immediately before detonation. The F6Fs flew directly from the carrier to positions 5 nmi (9.3 km) east of Bikini Atoli. All reported on station at 0725, but the first photographic run was delayed to allow time for the dissipation of the low stratus and cumulus clouds. After making photographic runs at 0747 and 0826, the Queen Elight left the target area and landed aboard <u>Saidor</u> by 0840 (Reference C.9,206, p. VII-(E)-165).

Meanwhile, F6F Sugar had made a calibration run over Bikini Atoll at 0725 from 3.500 feet (i.1 km) and then returned to make three photo flights over the target array at 0742, 0750, and 0800, maintaining an altitude of 3,500 feet (i.1 km) for each run. Sugar made a final calibration run at 0810 before returning to <u>Saidor</u> at 0839. F6F Roger, meanwhile, had made a calibration run at 0729 and a photo run over the target array. F6F Roger then proceeded to its assigned station at 0827 (Reference C.9.206, pp. VII-(E)-165 and VII-(E)-166).

Two TBMs. Nan and Oboe, of the photographic unit were launched from <u>Saidor</u> at 0734 and 0736. At 0800 they were on station, 20 nmi (37 km) from the target center. At h-hour TBM Nan was orbiting at 9,000 feet (2.1 km), and Oboe orbited at 4,000 feet (1.2 km) (Reference C.9.206, p. VII+(E)+166).

By N-hour, five photographic F6Fs had completed preshot photography of the target array and returned to <u>Saidor</u> (Reference C.9.206, p. VII-(E)-168). Reger was the only photography F6F still airborne at detonation, approximately 12 na) (22 km) away and flying directly toward the target center at 10,000 feet (3.0 km). Reger took motion pictures of the burst and other photographs of the cloud column and the target ships until 0927 (Reference C.9.206, p. VII-(E)-70).

TBM Obce was orbiting at 4,000 feet (1,2 km), 20 nmi (37 km) from the target center at H-hour. It moved in as close as 8 nmi (15 km) during the first 6 minutes following the burst, made oblique angle photographs of the cloud column, and at 0906 returned to its carrier base. TBM Nan was approximately i2nmi (22 km) from target center at 0900. Immediately following the burst. It began circling the cloud column counterclockwise and took photographs of the cloud and of other aircraft in the area. Six minutes after the detonation. Nan began to fly a 270° arc at a minimum radius of 8 nmi (15 km) from the target, reversing its direction away from the area whenever necessary to avoid radioactivity. Notion picture photography had been started immediately preceding the burst and continued until 0933 when Nan left the area (Reference C.9.206, p. VII-(E)-170).

At 1013 the photographic carrier unit was directed to prepare two F6F photographic alteraft for a special oceanographic survey in Bikini Lagoon. The F6Fs. Sonar-1 and Sonar-2, were launched from <u>Saidor</u> at 1615 and proceeded immediately over the lagoon. They made their strip color photographic runs from beatings  $180^{\circ}$  and  $0^{\circ}$  between 250 and 400 feet (76 and 176 meters) altitude over the target area. The aircraft landed on <u>Saidor</u> by 1715 (Reference C.9.206, p. V(1-(E)-175).

Although not actually employed on ARLE day, the Helicopter Unit (TU 1.6.25) was standing by for air-see rescue and miscellaneous missions as they arose. Moreover, its employment on D-1, when a helicopter delivered repair parts to Aomen Island, ensured operation of the photographic towers there on D-day (Reference C.9.206, p. VII-(E)-175). The ABLE Air Operation Plan called for a TU 1.6.25 helicopter to recover dirt samples from Bikini Island (Reference B.0.1, p. F-II-14), but there is no evidence that this mission took place.

SHOT BAKER. The mission of the units aboard the photographic carrier <u>Saidor</u> remained almost unchanged for BAKER. Seven F6Fs and four TBMs carried out special photographic missions over the Bikini target area on 5 July. Four TBM drone boat control aircraft practiced their BAKER assignments with <u>Beqor</u> on the same day. The aircraft rehearsed successfully on 14 July. Two F6Fs were involved in accidents between 2 July and 24 July. One plane and its pilot were lost on 5 July when it spun into the sea while approaching the carrier. Another plane was badly damaged on 19 July when the tail wheel gave way in landing (Reference C.9.206, p. VII-(E)-189).

The first elements of the Navy air group to begin movement to BAKER stations were the aircraft carrier and its plane guard destroyers. At 0930 on 24 July. Saidor, accompanied by destroyers Furse and Perry, departed Bikini Lagoon to take up position in area Paige. Six P6P photographic aircraft were launched from Saidor between 0655 and 0704. The mission of the group was primarily to obtain still photographs of the target array immediately before the deconation. All six F6Fs fiew directly from the photographic carrier to positions 5 nmi (9.3 km) east of Bikini Atoll, reporting on station between 0710 and 0716. One flight made photomapping runs of the target array at 0742 and 0820 and left the target area at 0625 to return to Saidor. At 0710, P6F Sugar made a camera calibration run over Bikini Island at 500 feet (152 meters), then climbed to 3,500 feet (1.1 km). It made photography runs of the target array beginning at 0725 before returning to Saidor at 0835. F6F Roger made a pass over Bikini Island from 600 feet (183 meters) at 0750 and took up station 10 nmi (18.5 km) nottheast of the target array while awaiting the detonation (Reference C.9.206. pp. VII-( $\varepsilon$ )-211 and VII-( $\varepsilon$ )-212).

Three TBMs (Nan-1. Nan-2. and Oboe) were launched from <u>Saidor</u> between 0650 and 0710. By 0745 all were on station. The Nan TBMs were 7 nmi (13 km) from the target center at 10.500 feet (3.2 km). Oboe, however, proceeded first to Nam Island at Bikini Atoli and flew counterclockwise around the target center at 4.000 feet (1.2 km) so the turret photographer could make oblique angle photographs of the target array. At 0745 Oboe was on station 1 nmi (1.9 km) southeast of the south tip of Eneu Island. At H-hour, Oboe was again circling the target center at 4.000 feet (1.2 km) (Reference C.9.206, p. VII-(E)-212).

Reger, the only photographic F6F still airborne at detonation, was orbiting at 11.000 feet (3.4 km). 10 nmi (18.5 km) northeast of the target center. It immediately approached within 5 nmi (9.3 km) of the cloud column, taking motion

pictures and other photographs of the cloud column and aircraft in the vicinity. The mission was completed by 0900 when Roger returned to the photographic carriet (Reference C.9.206, p. VII-(B)-215).

Nan-1 and Nan-2 were orbiting in loose formation 7 nml (13 km) from the target center at H-hour. After detonation, they circled the cloud column counterclockwise at approximately 5 nml (9.3 km) from its center and photographed the cloud and the aircraft. Oboe moved from the southeast of the south tip of fneu Island to within approximately 5 nml (9.3 km) of the cloud column, where it took photographs of the cloud and the aircraft in the vicinity. Their missions were completed between 0905 and 0908 and the three ylanes returned to Saldor (Reference C.9.206, p. VII-(E)-215).

Helicopters flew to some of the islands after BAKER to recover instruments (Reference C.9.206, p. VII- $(\Sigma)$ -222).

lask Unit 1.6.3 (Seaplane Unit)

Based at Ebeye, Kwajalein Atoll, the seaplane unit conducted (Reference C.9.206, p. VII-(E)-14):

- Photographic, radiological reconnaissance, air-sea rescue, and patrol operations
- Provided a)r shuttle service between Ebeye and Bikini.
- Provided air facilities
- Serviced and maintained seaplanes of the Navy air group.

Cattier Aircraft Service Unit (Fleet) 34 performed maintenance on the Unit.

TU 1.6.3 was composed of patrol bombers (PBM-5), converted to transport and alr-sea rescue alreaft, from Patrol Seaplane Squadron 32 (VPB-32) and Alr-Sea Rescue Squadron 4 (VH-4). Six VH-4 aircraft arrived at Ebeye Island from Salpan, Marianas Islands, on 10 March, and nine VPB-32 aircraft arrived between 16 and 22 March. On 20 March, elements of both squadrons reported to CTG 1.6 as TU 1.6.3 (Reference C.9.206, p. VII-(E)-25).

One PBM carried radiometric equipment to measure intensity of radiant energy as a function of time. The two PBM radiological reconnaissance alreaft carried equipment to determine the safe time for reentry into the lagoon. All aircraft carried normal communications equipment (Reference C.9.206, p. VII-(()-39).

Two PBN radiological reconnaissance aircraft also carried equipment to record the observations made by the ship observer. photographic equipment, special gas masks, and other equipment. The PBMs for photographic wave measurement also carried special transmitters for actuation of cameras, sonobuoy receivers with scope cameras, and television receivers (Reference C.9.206, p. VII-(E)-39). Two PBM photographic aircraft took high-angle oblique photographs before, during, and after the blast for documentary purposes and for possible radio phototransmission. Three PBM photographic aircraft were specially equipped to obtain motion pictures of the blast for blast analysis and to obtain still photos for photogrammetric analysis. documentary records, and possible radio phototransmission (Reference C.9.206, p.  $VII^{-}(E)^{-38}$ ).

TU 1.6.3 training was carried out at Ebeye Naval Air Base (TU 1.6.31). Since the Patrol Seaplane Squadron (TU 1.6.32) was actively engaged in flight operations. Its training for ABLE was limited almost exclusively to the three tebearsals. The unit was responsible for a minimum of one roundtrip flight daily from Ebeye to Bikini. Including the three rehearsals, the nine PBMs of TU 1.6.32 flew 1.139.8 hours during the period from 16 March to 30 June, transporting 1.521 passengers, 184.104 pounds of mail, and 73.469 pounds of freight (Reference C.9.206, p. VII-(E)-125).

VH-4 (TU 1.6.33) was also actively engaged in flight operations. It was directed to maintain one PBM each on the water at Ebeye and Bikini for air sea rescue missions from 2 hours after suntise to 2 hours before sunset. The unit assisted the patrol seaplane unit with overflow CRO9EROADS passengers and freight transportation. A total of 714.3 hours was flown by the six PBMs of TU 1.6.33 between 11 March and 30 June (Reference C.9.206. p. VII-(E)-126).

SHOT ABLE. On 30 June the last seaplane cleared Bikini Lagoon at 1534. The first group of Navy aircraft to be airborne on ABLE day were nine scaplanes from Ebeye. They took off between 0503 and 0620 and reported at their respective stations off Bikini Lagoon between 0639 and 0730 (Reference C.9,206, p. VII $\cdot$ (E)-163). Each plane carried a radsafe officer with a Geiger counter.

The radiometry seaplane took off at 0503. It was the first Navy aircraft to depart, and at 0710 it was on its ABLE day station 15 nmi (28 km) bearing  $15^{\circ}$  from the target center. Two radiological reconnaissance seaplanes Charlie and Dog took off at 0514 and 0515 and reported on station at 0730, 30 nmi (56 km) from the target center. Three photographic seaplanes (Tare, Uncle, and William) were next off the water between 0519 and 0529. By 0658 all had reported on station, i5 nmi (28 km) from the target center at orbit points Charlie. King, and Dog (Reference C.9.206, p. VII-(E)-164).

The first air-sea rescue scapiane (Dumbo-2) of TU 1.6.33 was already at 0505 and at 0639 arrived at its station at Orbit Point Uncle. Dumbo-1 was off the water next at 0510 and at 0642 was on station at Orbit Point Love. Both scapianes were stationed 30 nmi (56 km) from the target center. Dumbo-3 was the last to take off at 0620 and at 0710 reported on station at 7,000 feet (2.1 km) over Wotho Atoll. 90 nmi (167 km) from the target center (Reference C.9.206, pp. VII-(E)-164 and VII-(E)-165).

The radiometry seaplane was orbiting 15 nmi (28 km) northeast of the target center at the time of detonation. Equipped with special radiometry instruments to photograph and measure the infrared and visible electromagnetic radiation of the blast, the plane remained on station only 6 minutes making its recording of blast phenomena (Reference C.9.206. p. VII-(E)-168).

Three TU 1.6.32 seaplanes (Tare, Uncle. and William) measured the waves resulting from the burst. They were also instructed to monitor readings of the sonobuoys placed in the target array and to obtain the receiver scope photographs. These attempts were unsuccessful because of the distance away from the target array required by the air plan. Uncle was also charged with radioactuation of the synchronized cameras in the photography towers on Eneu. Bikini, and Aomen islands as well as those in PBMs Tare and William. At 0900 all three seaplanes were on station 15 mmi (20 km) from the target center. At the instant of detonation the three seaplanes carried out the following missions:

- Tare started from Orbit Point Charle and flew track 349°T for 4 nm1 (7.4 km), and then changed track right to 37°T for 20 nm3 (37 km), maintaining a ground speed of approximately 150 knots (278 km/hr).
- Uncle started from Orbit Point King and flew track 0°T for 20 nmi (37 km) maintaining a ground speed of approximately 150 knots (278 km/hr)
- William started from Orbit Point Dog and flew track 309<sup>o</sup>T for 16 mml (30 km), maintaining a ground speed of approximately 135 knots (250 km/hr).

Photographic and television equipment was turned on either immediately before or at the instant of the flash, and pictures and recordings were made throughout the runs and until approximately 0923 (Reference C.9.206, p. VII-(E)-169).

The radiological reconnaissance seaplanes, Charlie and Dog, were on station at 2,000 feet (610 meters). 30 nmi (55 km) bearing  $30^{\circ}$  from the target center at the time of burst. Leaving their stations shortly after R-hour, Charlie and Dog moved to positions approximately 5 nmi (9.3 km) upwind from the detonation points, where they awaited voice radio instructions from the Radiological Safety Officer to begin measuring radioactivity over the target area. While Dog orbited on its new station, Charlie at 0952 approached within approximately 3 nmi (5.6 km) of the target center. It then began traversing the target area in a series of parallel sweeps, flying normal to the wind direction, and covering a tectangle roughly 6 by 5 nmi (11 by 9 km) whose center was the target area.

The path of the sweeps along the rectangle were not regular, however, since the seaplane was also instructed to reduce progressively the distance of the sweeps from the radioactive area. Also, if high levels of radioactivity were encountered, the PBM was to turn abruptly, citcle upwind, and turn back from the next sweep along the rectangular course. On completion of the runs at 2,000 feet (510 meters), Charlie dropped down to 1,000 feet (305 meters) at 1045 and carried through a series of similar sweeps at the new altitude. At 1126 the altitude was lowered to 500 feet (152 meters) and the pattern of radiological sweeps again was repeated.

As soon as Charlie had completed its sweeps at one altitude. Dog moved in and carried through the same pattern of operation. Dog commenced its 2,000 foot (610-meter) sweeps at 1055, its 1,000-foot (305-meter) sweeps at 1140, and its 500-foot (152-meter) sweeps at 1231. On completion of these flights, both seaplanes made radiological runs over the target area. At 1310 Dog flew directly over the target center at 3,000 feet (914 meters). Additional sweeps over the target area at varying altitudes were continued until 1402 when Charlie departed for Ebeye and until 1427 when Dog departed (Reference C.9.206, pp. VII-(E)-173 and VII-(E)-174). The three Dumbo seeplanes of TU 1.6.33 continued to stand by for Air-sea rescue calls. At 0806, Dumbo-3 reported its Geiger-Nueller counter was out of order. When Dumbo-4, the standby PBM at Ebeye, was ordered as a replacement, it reported having no counter. Nonetheless, Dumbo-3 was ordered to return to Ebeye. Dumbo-2 was shifted to the position over Wotho, and Dumbo-1 was transferred to Orbit Point Uncle. The scapianes remained on station until 1425 at Uncle and 1455 over Wotho (Reference C.9.206, p. VII-( $\pounds$ )-174).

In addition to providing air transportation between Sbeye and Bikini in the period between the two tests. TU 1.6.32 prepared six PBMs to perform assignments similar to those executed on ABLE day. It also prepared two new seaplanes for participation in shot BAKER, namely Charlie-2 (a radiological reconnaissance PBM) and Eagle Eye (a special observation PBM) (Reference C.9.206, VI1-(E)-190).

TU 1.6.33 continued its air-sea rescue and transportation mission between the two tests. For BAKER its mission was altered to provide two PBM air-sea rescue standby aircraft. Dumbo-4 and Dumbo-5. In addition to the three air-sea rescue seaplanes that had participated in ABLE (Reference C.9.206, p. VII-(E)-190).

SHOT BAKER. On 24 July the final scaplane from Bikini lawled at Ebeye at 1614 (Reference C.9.206, p. VII-(E)-208).

A VPB-32 radiological recongaissance seaplane (Dog) taking off at 0501 was the first Navy aircraft to depart from Ebeye for Bikini on 25 July for BAKER operations. It was followed at 0516 by a second radiological recommaissance. seaplane (Charlie-1), By 0655 both Dog and Charlie-) were orbiting on their assigned stations at Orbit Point Able, bearing 45°T, 20 nml (37 km) from the target center. Reanwhile three photographic seaplanes (Tare, Uncle, and William) were airborne between G527 and O542. By 0705 all had reported on startion at Orbit Points Charlie, King, and Dog, respectively, each 9 omi (17 km) from the target center. Tare and Uncle orbited in loose formation at 12,000 feet (3.7 km) bearing 188° and 215°, respectively, and William at 3.000 feet (914 meters) bearing 325°. The radiometry seaplane departed at 0505 and at 0645 was on station at Orbit Point Yoke bearing 45°T, 7 nm1 (13 km) from the target center. The observation PBM (Eagle Eye) had replaced one of the Army C-54s that had performed a similar mission in shot AHLE. Eagle Eye was off the water at 0545 and at 0713 was at its station approximately 10 nml (18.5 km) from the target center, bearing 285°f at 8,000 [eet (2.4 km) (Refetence C.9.206, p. VI1-(E)-20).

Three air-sea rescue seaplanes also took of: from the lagoon at Ebeye during the same interval. Dumbo-1 was airborne at 0510 and at 0646 arrived at its station at Orbit Point Love, bearing  $315^{\circ}T$ . 30 nmi (56 km) from the target center at 3.000 feet (914 meters). Dumbo-2 departed at 0513 and at 0647 assumed its position at Orbit Point Able, bearing  $45^{\circ}T$ . 20 nmi (37 km) from the target center at 3.000 feet (914 meters). Dumbo-3 departed last at 0617 and at 0709 was on station at 7.000 feet (2.1 km) over Wotho Atoll. 90 nmi (167 km) from the target center (Reference C.9.206, p. VII-(E)-210).

The radiometry seaplane at 0833. from its orbit point at 9,500 [eet (2.9 km), 7 nmi (13 km) from the target center, took up a course heading  $335^{9}T$  so that the point of detonation was within 5° of the bore-sighted axis of the radiometric equipment. Remaining at the same attitude, successful operation of the radiometric, photometric, and spectrographic equipment was accomplished before its departure from the area at 0852 (Reference C.9.206, p. VII-(E)-214).

One minute before the detonation, three seaplanes (Tare, Uncle, and William) moved from their orbit points to positions tangent to a circle approximately 8 nml (15 km) from the target center. Tare and Uncle then flow a counterclockwise course (rom 12,000 feet (3.7 km), generally along the periphery of the circle. Bach plane flew at approximately 135 knots (250 km/hr) taking synchronized photographs of the waves and water column thrown up by the explosion. Seaplane Tare at 0834 and 0845 also transmitted synchronized signals in order to induce simultaneous operation of the airborne and ground tower cameras. The three PBMs completed their runs by 0907 and immediately departed for Ebeye (Reference C.9.206, p. VII-(E)-214).

The observation seaplane (Eagle Eye) was on course  $285^{\circ}T$  at 7,900 feet (2.4 km), approximately 10 nml (16.5 km) from the target center at the time of detonation. It orbited the same general position until 0908 when it returned to Ebeye (Reference C.9.205, p. VII-(E)-216).

Two radiological reconnaissance seaplanes (Charlie-1 and Dog) were orbiting at 2,000 feet (610 meters), 20 nmi (37 km) from the target center at H-hour. Immediately after the explosion, Charlie-1 proceeded to a position 5 nmi (9.3 km) upwind from the target center and then approached within approximately 3 rmi (5.6 km) at 4,000 feet (1.2 km). At 0915 it began traversing the radioactive area in a series of sweeps along parallel tracks normal to the wind direction, covering a rectangle roughly 6 by 5 nmi (11 by 9 km). The paths of the sweeps were not regular because the course was shifted each time a radioactive area was encountered. Charlie-1 made sweeps at 3,000, 2,000, 1,000, and 500 feet (914, 610, 305, and 152 meters). It then orbited the target array at 500 feet (152 meters) from 4 nmi (7.4 km) before departing for fbeye at 1304 after being relieved by Charlie-2 (Reference C.9,206, p. VII (E)-218).

PBM Dog in the meantime had first made sweeps over the area occupied by the JTF ) vessels northeast of Bikini Atoll and reported on the radioactivity encountered. As Charlie-1 reported completing each sweep over the target area. Dog came in at 100B and flew four similar flight patterns at the same altitudes. After completing its radiological sweeps at 1214. Dog orbited over the target area and photographed the damaged and sinking <u>Saratoga</u> between 1215 and 1319 and then departed for Ebeye. Charlie-2 relieved Charlie-1 at 1258. At 1330 and 1334 it made photographic runs over <u>Saratoga</u> and at 1400 began the first of two photographic runs over the target area at 1,500 feet (457 meters). After descending to 1,000 feet (305 meters), Charlie-2 made eight radiological reconnaissance surveys over the radioactive area between 1425 and 1506. It executed a sonar run 2 nml (3.7 km) west of the target area between 1535 and 1545 at 400 Feet (122 meters). From 1,000 feet (305 meters), photographs of the sinking of <u>Saratoga</u> were taken between 1552 and 1610. Charlie-2 departed for Ebeye at 1615 (Reference C.9.206, p. VII-(E)-219). No rescues were necessary. The alress rescue seaplanes left the area as follows: Dumbo-3 at 0952. Dumbo-2 at 1120. and Dumbo-1 at 1243. Dumbo-4. which relieved Dumbo-1 at 1243, remained on station until 1619 (Reference C.9.206. p. VII-(E)-219).

lask Unit 1.6.4 (Seaplane Tender Unit, Bikini)

The mission of TJ 1.6.4 was to provide tender and air transport terminal services for seaplanes at Bikini Atoll. It was based from the seaplane tender <u>USS Orca</u> (AVP-49).

<u>Orea</u> arrived at Bikini Lagoon on 7 May 1946 to assume its assigned duties. It was felt, however, that provision should be made for air-sea rescue units both at Bikini and Kwajalein in case of takeoff accidents. By 15 June an AVR air-sea rescue boat had been obtained for Bikini Lagoon. During operating hours the boat was stationed at the seaplane runway. Once in the worning and again in the late afternoon it made sweeps of the area to be sure the takeoff space was clear. About this time Commander, Marianas, requested Commander in Chief, Pacific (CINCPAC) to Furnish two destroyers for air-sea rescue service at Kwajalein, one to be stationed within the lagoon and the other in the ocean near the runway. CINCPAC replied that the destroyers were not available in the Pacific Fleet. It was necessary to assign vessels from JTF 1 to patrol the entrance to Kwajalein Lagoon for air-sea rescue duty (Reference C.9.206, p. VII-(E)-26). LCI(L)-977 from TU 1.8.3 (Dispatch and Boat Pool Unit) was assigned this duty.

SMOT ARLE. On 30 June the last seaplane cleated Bikini Lagoon at 1534. At 1648 <u>Orca</u> moved from the lagoon to its station in area Paige near reference Point Wan, bearing 0<sup>o</sup>T. 20 mm1 (37 km) from the center of Bikini Island.

SHOT BAKER. On 24 July the last seaplane from Bikini Island landed at Ebeye at 1614 (Reference C.9.206. p. VII-(E)-208).

Other Navy Air Groups

- Carrier Aircraft Service Unit (Fleet) 34 (CASU[F]-34). Located on Ebeye, CASU(F)-34 performed maintenance for aircraft of the Seoplane Unit (TU 1.6.3) (Reference C.9.206, p. VII-(E)-190).
- <u>VPW-1</u>. This unit sent at least four Navy PB4Y-2s under Commander, Kwajalein Atoll, to assist in weather reconnaissance and air-sea rescue missions (Reference C.9.206, p. VII-(E)-190). The detachment at Xwajalein was recalled to Agana. Cuam, on 12 August 1946. This unit was airborne on shot days, but flew weather reconnaissance flights well away from the test area.
- <u>VPB-116</u>. With VPW-1. VPB-116 assisted in weather reconnaissance and air-sea rescue missions using 12 PB4Y-2 aircraft under Commander, Kwajalein Atoli (Reference C.9.206, p. VII-(E)-190). This unit was not airborne on shot days.
- <u>Carrier Aircraft Service Unit 8 (CASU-8)</u>. This unit performed aircraft maintenance on the PB4Y-Zs from VPW-1 and VPB-116 at NAB Kwajalein (Reference C.9.206, p. VII-(6)-190).

# CHAPTER 10

# U.S. MARINE CORPS PARTICIPATION

Approximately 580 Marines participated at Bikini and Kwajalein during Operation CROSSROADS. Participation by the U.S. Marine Corps primarily involved photographic duties and security guard duties. They provided security on Aomen. Bikini. and Sneu islands at Bikini Atoli. on Kwajalein Island. and aboard certain task force ships. Approximately 155 Marines were aboard <u>USS Saidor</u> (CVE-117). According to a CROSSROADS participant there were three different Marine units/groups aboard the ship (Reference C.12.5):

- A detachment of Marine Fighter Squadcon (VMF-513), based out of San Diego, California. Primarily, this was an aircraft maintenance detachment that was responsible for the aircraft of a Navy photographic detachment aboard <u>Saidor</u>.
- Marines who were part of the ship's air department.
- Twenty-eight enlisted Marines who were listed as Marine photographic personnel and who were transported by <u>Saidor</u>. Some were administratively assigned to VMP-513 and some to US5 Wharton (AP-7).

Saidor was part of Task Unit 1.6.2 (Photo Carrier Unit), which trained all crews for the bomb tests. This unit conducted aerial photo operations, operated helicopters for radiological reconnaissance, conducted aerial control of drone boats, and operated a photo laboratory on board (Reference C.9.206, p. VII-(E) 14: Reference C.12.5). Movie crews aboard Saidor also filmed the target array and provided documentary coverage of the fleet and the visit of Commander Joint Task Force 1 to Rongerik Atoli (Reference 0.7.1).

A Marine guard detachment at Bikini Atoli was Eurnished by Marine Ground Forces. A total of 36 Marine guards were stationed on Bikini Island, 6 each were on Acmen and Eneu Islands.

A provisional Marine detachment at Enewetak had a total of 107 Marines. This unit was a heavy antiaircraft detachment whose duties were not directly related to CROSSROADS (Reference C.11.14).

Provisional detachments and normal Marine detachments were on a number of task force ships (Table 17) (Reference C.13.8). Duties primarily involved ship security.

Badge readings have not been located for Marine Corps personnel Who Patticipated in Operation CROSSROADS.

Ship	No. of Marines	Ship	No. of Marines
USS Albemarle (AV-5) (MD)	28	USS Mt. McKinley (AGC-7) (MD)	47
USS Bayfield (APA-33) (TOM)	1	<u>USS Oftava</u> (AKA-191) (10M)	1
<u>USS Bexa</u> t (APA-237) (TQM)	2	USS Rockbridge (APA-228) (TQM)	2
<u>JSS Bottineau</u> (APA-235) (TQN)	z	USS Rockingham (APA-229) (TQM)	j.
ISS Cumber land Sound (AV-17) (MD)	20	USS Rockwall (APA-230) (TQM)	t
USS Fall River (CA-131) (MD)	48	USS Rolette (AKA-99) (TOM)	4
ISS George Clymer (APA-27) (TQM)	2	<u>USS_St. Croix</u> (APA-231) (10M)	2
<u>USS Henrico</u> (APA-45) (IQM)	Ş	<u>USS Shangri-La</u> (CV-38) (MD)	73
		<u>USS_Wharton</u> (AP-7) (MO)	30

# Table 17. Provisional and U.S. Marine Corps detachments aboard CROSSROADS vessels.

# CHAPTER 11

# PARTICIPATION OF OTHER GOVERNMENT AGENCIES, CONTRACTING FIRMS, AND UNIVERSITIES

Many civilians from government agencies, contracting firms, and universities assisted the military personnel in Operation CROSSROADS. Civilians had played the major role in the development of atomic weapons during the war and civilian assistance at CROSSROADS was an important element in the scientific aspects of the tests. CROSSROADS occurred during a time of massive demobilization following World War II. There was also an acute shortage of specialists. including radiological safety (radsafe) monitors, who had to be recruited from universities with promises made that they would be returned before the start of the school year. Operation CROSSROADS called upon many of the nation's leading civilian scientists. The educational background of some of these scientists serving in the Radiological Safety Section for Test ABLE are enumerated below (Reference C.9.206, p. VII-(C)-6):

Number	Area of Advanced Study
36	Medicine
20	Physics
19	Chemistry
7	Btology
12	Engineering
3	Anatomy

Roles played by the various participating government agencies, contracting fitms and universities are discussed below.

#### GOVERNMENT AGENCIES

<u>U.S. Army Manhattan Engineer District</u>. This organization was officially established on 13 August 1942, although its organization had been in process for 2 months before. The Manhattan Project developed and produced the atomic bombs used in World War II and at CROSSROADS. After the passage of the Atomic Energy Act of 1946, the Manhattan Engineer District was dissolved at the end of 1946, and its contracts, facilities and management responsibilities were transferred by the Army to the Atomic Energy Commission, which was activated 1 January 1947 (Reference C.9,208, pp. 3.10 fF; Reference C.8.1, pp. 6 through 15).

After the formal creation of Joint Task Force 1 (JTF 1). Manhattan Engineer District assisted principally through the 0138 Los Alamos Group and the 013M Radioactivity Group. It also supplied the Technical Director as well as 27 observers for shot ABLE and 21 for shot BAKER. These personnel were berthed aboard <u>USS Cumberland Sound</u> (AV-17). Two individuals were badged and had zero readings. Three of its laboratories participated in CROSSROADS and the 1947 Bikini Scientific Resurvey: these are discussed incediately below. All Bikini Resurvey personnel had film badges and none recorded greater than the daily tolerance limit of 0.1 R.

- Argonne National Laboratory. This laboratory, operated by the University of Chicago, provided one scientist for the 1947 Bikini Resurvey's Radiochemistry and Radiophysics Group to investigate the presence and dispersal of plutonium and fission products and to study the vertical distribution of radioactivity in rocks (Reference C.8.1. pp. 6 through 15: Reference B.0.18).
- <u>Clinton Laboratories. Oak Ridge. Tennessee</u>. On 20 May 1946, ten scientists from Clinton Laboratories were scheduled to attend CROSSROADS as part of the Radiological Safety Section. Eight personne! were badged, with a high of 0.30 R and and an average exposure of 0.10 R. Clinton Laboratories also provided a physicist for the Bikini Resurvey's Radiochemistry and Radiophysics Group to investigate the presence and dispersal of plutonium and fission products and to study the vertical distribution of radioactivity in rocks (Reference C.B.1, pp. 6 through 15: Reference B.0.18).
- Los Alamos Laboratory. This group was responsible for preparing timing and firing devices, assembling and delivering the bomb, measuring certain phenomena, and determining yield of weapons. It was responsible to three different groups: the Technical Director, the Director of Los Alamos Laboratory, and the Deputy Task Force Commander for Technical Direction. This group consisted of 124 personnel including civilian consultants from universities, three Army officers, and two Navy officers. They were berthed aboard <u>Cumberland Sound</u> and <u>USS Albematic</u> (AV-5). Five senior scientists served on the Medico-Legal Board. In addition, 63 personnel were assigned to the Radiological Safety Section as of 26 May. Of this group, 38 were badged. Fifteen of these had exposures of zero, the high was 0.94 R, and the average was 0.17 R.
- <u>U.S. Department of Interior -- Fish and Wildlife Service</u>. The Fish and Wildlife Service designated three scientists and three fishermen to assist in fish surveys at Bikini prior to the tests. The unit collected specimens and identified fish in the shallows of the reef and in the lagoon. The unit operated from YMS 413 (see Appendix A for details). After tests ABLE and BAKER, the unit caught live fish and recovered dead fish for studies. No one was badged. The three scientists, plus eight additional scientists, also participated in the Bikini Resurvey in 1947. All persons were badged during the resurvey (Reference C.9.208. p. 3.11: Reference C.8.1, pp. 6 through 15).
- <u>U.S. Geological Survey (USGS)</u>. USGS personnel worked with the Oceanography Group and investigated the physiography, geology, and ecology of Bikini Atoll. USGS provided four scientists for CROSSROADS and the 1947 Aikini Resurvey to study ecology of reef-building organisms such as algae and corals and the effects of radiation upon them. None were badged for CROSS-ROADS. Personnel participating in the (esurvey were badged (Reference C.9.208, p. 3.11; Reference C.8.1, pp. 6 through 15).

- Smithsohian Institute. Smithsonian Institute cooperated with the Oceanography Group studying biological and oceanographic phenomena at Bikini. The institute provided two scientists to make fish surveys and study littoral and land animals. reef. lagoon. fish. algae. seed plants. and plankton at Bikini Atoll. These two plus two additional scientists also participated in the Bikini Resurvey to study the possible radiological effects upon the development of invertebrates and physiology of marine and other plant life. None were badged at CROSSROADS. Personnel on the resurvey were badged (Reference C.9.208. p. 3.11; Reference C.8.1, pp. 6 through 15).
- <u>Pederal Security Agency -- National Cancer Institute</u>. An unknown number of personnel from the National Cancer Institute helped the Director of Ship Material (DSN) Medical Group by providing mice for radiation experiments (Reference C.9.208, p. 3.11; Reference C.8.1, pp. 6 through 15).
- The National Institute for the U.S. Public Health Service. This organization assisted the DSM Group and provided three public health service officers to the 013 Radioactivity Group. The officers were betthed aboard USS Haven (AH-12) and served as radsafe monitors part of the time. Two were badged: one had zero reading and the other had 0.06 R (Reference C.9.208. p. 3.10 if: Reference C.4.1).
- Department of Commerce -- National Bureau of Standards (NBS). NBS personnel assisted the Remote Measurements Group in attempts to detect nuclear detonations from remote locations in Projects 11. 12. and 16 of Program VIII (see Appendix C). Individual field groups were located at Honolulu. Hawaii: Kwajalein Island: Enewetak Atoll: Wake. Cuam and Midway Islands: Manila. Philippines: Nome. Sitka. Juneau. and Anchorage. Alaska: Bozeman. Montana: Santa Ana., San Francisco. and San Leandro. California: Seattle. Washington: Portland. Oregon: Tuscon. Arizona: Kingsville. Texas: Grand Island. Nebraska: Rapid City. South Dakota: St. Louis. Missouri: Chicago. Illinois: Australia: Peru: San Juan. Puerto Rico: Germany: and Washington, D.C. The total number of personnel involved is unknown (Reference C.9.208. p. 3.45): Reference B.2.1).
- U.S. Coast & Geodetic Survey (USCGS). USCGS personnel supported the Oceanography Group by Investigating tides and strong seismic disturbances. They made seismic measurements at Kwajalein. Wake. and Midway islands: Honolulu, Hawaii: Sitka. Alaska: San Juan. Puerto Rico: and Tuscon. Arizona. They also sent a party to survey the general layout of Bikini Atoli before CROSSROADS. The total number of personnel involved is unknown (Reference C.9.208. p. 3.12: Reference B.2.1).
- <u>Treasury Department</u> -- U.S. <u>Coast Guard</u>. The Coast Guard furnished two vessels. <u>USCG Bramble</u> (WAGL-392) and <u>USCG Red Bud</u> (WAGL-398), and personnel. <u>Bramble</u> laid navigation buoys at Bikini and was to survey the effects of nuclear tests on fish and wildlife and to conduct oceonographic surveys to determine the characteristics of ocean currents inside and around the atoll. <u>Red Bud</u> assisted in a brief survey of western islands of Bikini Atoll before CROSSROADS. These vessels operated as part of Task Unit 1.8.5 (Survey Unit). <u>Bramble</u> had 49 crewmembers and operated at Bikini Atoll from 6 July through 24 August (Reference C.9.208, p. 3.12).

# CONTRACTORS, UNIVERSITIES, AND OTHER DOMESTIC DEGANIZATIONS

In addition to military and nonmilitary Federal agencies, there were also private groups who participated in CROSSROADS. Their organizations and activities are described briefly below, along with industrial organizations that either participated directly or indirectly by supplying personnel and equipment.

- American Red Cross. Three Red Cross representatives were assigned on the U.S. Army ship David C. Shanks (AP-160). None were badged (Reference B.2.1).
- <u>Bell Telephone Laboratories</u>. Two people from this organization were attached to the Staff of the Electronics Coordinating Officer and assigned to <u>USS</u> <u>Begor</u> (APD-127). Neither was badged (Reference C.9.208, pp. 3.12; Reference 8.0.18).
- Carbide and Carbon Chemicals Corporation (C&C Co). Twenty-six employees of C&C Co. were selected to serve in the Radiological Safety Section at CROSS-ROADS. Of this group, 15 were badged. Four had recorded exposures of 0 R. The high exposure was 1.05 R. and the average for the group was 0.366 R.
- Carnegie Institute. Personnel from Carnegie participated in Project VIII-9. Terrestrial Magnetism. Locations ware Honolulu. Hawaii: Sitka. Alaska: Tuscon, Arizona: Cheltenham. Maryland: San Juan. Puerto Rico: Huancayo. Peru: and Watheroo. Australia. Number of personnel involved is unknown (Reference C.9.208. p. 3.45).
- <u>Columbia University</u>. One professor from Columbia served in the Radiological Safety Section. His recorded exposure was 0 R.
- <u>Cleaver Brooks Co.</u> This company provided a technician and an assistant to repair distillation units at Bikini. Neither was badged. (Reference C.9.206. p. VIJ-(A)-104).
- Cornell Aeronautical Laboratory. This laboratory provided engineering services and telemetering equipment, plus electronics and four engineers for CROSS-ROADS and one engineer for the Bikini Resurvey's Underwater Photography and Television Group. Two were badged for CROSSROADS and had zero readings. Everyone in the Resurvey Group was badged (Reference C.8.1, pp. 6 through 15; Reference B.0.18).
- <u>Eastman Kodak Co.</u> Three scientists from Kodak were part of the Radiological Safety Section. One member of this group also served on the Medico-Legal Board. The recorded exposures for the three personnel were 0.15 R. 0.16 R. and 0.24 R.
- <u>Fairbanks Morse & Co., Beloit, Wisconsin</u>. This company provided spare parts and a technician to repair main power plants at Kwajalein. It is unknown if this person was badged. (Reference C.9.206, pp. VII-(A) 96 (f.).
- Fairchild Camera & Instrument Co., Jamaica, New York. This company was contracted to provide steel boxes for housing batteries of cameras to be installed on photographic towers. It is unknown if personnel from this company were at Bikini. (Reference C.9.206, p. VII-(A)-96).

- <u>Franklin Institute's Bartol Research Foundation</u>. One physicist from the organization was in the Bikini Resurvey's Radiochemistry and Radiophysics Group to investigate the presence and dispersal of plutonium and fission products and to study the vertical distribution of radioactivity in rocks. He was badged (Reference C.8.1. pp. 6 through 15: Reference B.0.18).
- <u>G.E. Failing Co.</u> Under Navy contract for drilling operations at Bikini, this company also provided eight personnel for the Bikini Resurvey in 1947. Approximately nine individuals participated at Bikini during CROSSROAOS. None were badged (Reference C.9.208, pp. 3.12 and 3.13; Reference B.2.1).
- <u>Geotechnical Corp.</u>, Ballas, <u>Texas</u>. This corporation made seismic measurements. It is unknown if any personnel were provided at Bikini (Reference C.9.208, pp. 3.12 and 3.13; Reference B.2.1).
- Lenox Hill Hospital. An expert in radiological physics was sent from Lenox Hill Hospital in New York. He served in the Radiological Safety Section. His recorded exposure was 0 R.
- Massachusetts Institute of Technology (MIT). Three scientists from MIT were assigned to the Radiological Safety Section at CROSSROADS. All were badged: two had exposures of 0 R. and one had an exposure of 0.36 R. MIT also provided three research associates for the Bikini Resurvey's Radiochemistry and Radiophysics Group to investigate the presence and dispersal of plutonium and fission products. All three were badged (Reference C.8.1, pp. 6 through 15: Reference C.9.208, p. 3.13).
- <u>Monsanto Corporation</u>. One representative from Monsanto was selected to work in the Radiological Safety Section. He was not badged.
- <u>Princeton University</u>. The university provided engineering services and telemetering equipment. Five personnel were assigned to <u>USS Avery Island</u> (AG-76). Two were badged. The highest reading was 0.10 R (Reference C.9.208, pp. 3.12 and 3.13; Reference B.0.18).
- <u>Raytheon Corp., Waltham. Massachusetts</u>. Raytheon provided engineering services for sonar and radar electronic equipment. They also provided eight personnel assigned to <u>Avery Island</u> and attached to the Staff of the Electronics Coordinating Officer. All eight were badged. The highest reading among them was 0.35 R (Reference C.9.208, pp. 3.12 and 3.13; Reference B.0.18).
- <u>Scripps</u> Institution of Oceanography. Scripps provided technical personnel, including one radsafe monitor during CROSSROADS. Two oceanographers were provided for the Bikini Résurvey. No one was badged during CROSSROADS (Reference C.8.1, pp. 6 through 15: Reference C.9.208, p. 3.13).
- <u>Stanford Research Institute (SRI)</u>. One physiologist to study radiological effects on developing invertebrates and other plants came from SRI. He was not badged (Reference C.8.1, pp. 6 through 15; Reference C.9.208, p. 3.13).
- <u>Stanford University</u>. Four scientists from Stanford were involved in the Bikini Resurvey to investigate population studies of reef, lagoon, and pelagic

(ishes. Everyone in the resurvey was badged (Reference C.8.1, pp. 6 through 15; Reference C.9.208, p. 3.13).

- <u>University of Chicago</u>. Twenty-four professors and graduate students from the University of Chicago were selected to serve in the Radiological Safety Section. Of this group, 16 were badged, with a high exposure of 0.38 R. Nine individuals had exposures of 0 %, and the average recorded exposure was 0.072 R.
- <u>University of Minnesota</u>. The university provided a physiological chemist for the Bikini Resurvey's Radiochemistry and Radiophysics Group to investigate the presence and dispersal of plutonium and fission products and to study the vertical distribution of radioactivity in rocks. Everyone in the resurvey was badged (Reference C.8.1, pp. 6 through 15: Reference 3.0.18).
- <u>University of Notre Dame</u>. Notre Dame provided two chemistry professors for the Bikini Resurvey's Radiochemistry Group to investigate the presence and dispersal of plutonium and fission products. Both were badged (Reference C.8.1. pp. 6 through 15; Reference C.9.208, p. 3.13).
- University of Rochester. Twenty professors and graduate students were selected to work in the Radiological Safety Section at CROSSROADS. Many in this group were medical doctors or dosimetry expects. Of the 22, 10 were badged. Six had recorded exposures of 0 R. The remaining exposures were 0.017 R. 0.04 R. 0.05 R. and 0.72 R.
- <u>University of Tennessee</u>. This university provided one zoology professor and one agronomy professor for the Bikini Resurvey's Radiochemistry and Experimental Biology Group. Both were badged for the resurvey (Reference C.8.1, pp. 6 through 15: Reference C.9.208. p. 3.13).
- University of Washington. Applied Fisheries, Seattle, Washington. This organization supplied three scientists on board <u>Haven</u> as radsafe monitors. Only one person was badged and he recorded on exposure of 0.4 R. In addition, Applied Fisheries also provided eight more scientists for the Bikini Resurvey to study the effects of radiation in living forms in and around the atoll. They also did comparative studies of radiation in different plants and animal groups and comparative studies on distribution of radioactive material in organs and tissues plus histological studies of various fish tissues. All personnel for the resurvey were badged: (Reference C.8.1, pp. 6 through 15; Reference C.9.208, p. 3.13).
- <u>University of Wisconsin</u>. The university provided a research associate for the Bikini Resurvey's Radiochemistry and Radiophysics Group to investigate the presence and dispersal of plutonium and fission products and to study the vertical distribution of radioactivity in rocks. He was badged (Reference C.8.1, pp. 6 through 15: Reference B.0.18).
- <u>Victoreen Corporation</u>. Victoreen manufactured Geiger counters. Three employees of Victoreen were asked to be part of the Radiological Safety Section. Two had recorded exposures -- one was 0 R and the other was 0.21 R.

- <u>Western Electric Co</u>. This company provided one person to the staff of the Electronics Coordinating Officer. He was assigned to <u>Avery Island</u> and was not badged (Reference C.9.208, pp. 3.12 and 3.13; Reference B.0.18).
- <u>Westinghouse Co</u>. Westinghouse provided two personnel attached to the staff of the Electronics Coordinating Officer. One was assigned to <u>Avery Island</u>, and the second is indicated as having assignment on the target ship <u>USS</u> <u>Bracken</u> (APA-64). Weither was badged (Reference C.9.208, pp. 3.12 and 3.13; Reference B.0.18).
- Woods Hole Oceanographic Institute. Woods Hole provided one scientist who made physical field measurements at Bikini. Enewetak. Rongelap. and Rongerik atolls. He was not badged (Reference C.9.210, p. N-63).

#### OBSERVERS.

A large number of military and civilian scientists, both foreign and domestic observers, witnessed CROSSROADS. The Transport Group, Task Group 1.3. provided facilities for observers and the press. Task Unit 1.3.2 (Press Unit) consisted of <u>USS Appalachian</u> (AGC-1) and <u>Spindle Eye</u>, an Army press ship operating out of Kwajalein Island. The majority of the press were transported to Bikini aboard <u>Appalachian</u> and were berthed aboard. Others were berthed on <u>USS</u> <u>Mount McKinley</u> (AGC-7). <u>USS Papamint</u> (AGC-13) (the observers ship). <u>USS Saidor</u> (CVE-117) (photographic headquarters ship), and at Kwajalein Island at the Press Branch Headquarters. The following is the breakdown of press observers for tests ABLE and BAKER (Reference C.9.208. p. 3.14):

	<u>Number at ABLE</u>	Number at BAKER
U.S. Press Representatives (radio, pictorial services, magazines, etc.)	114	75
Foreign Press	10	8

In November 1945 the British Admirally Delegation requested that a small group of British scientists be permitted to participate in the planning and execution of CROSSRUADS. The U.S. Joint Chiefs of Staff decided on 5 December 1945 to invite British scientists. A total of nine scientists participated in blast pressure phenomena, physiological effects, radiation measurements, and effects on electronic equipment. A total of five personnel were badged. The bighest was reading 0.12 R (Reference C.9.208, p. 3.13).

Table 1B is a summary of the observers (Reference C.9.20B, pp. 3.12 and 3.13; Reference B.0.18).

Group	ABLE	BAKEN
U.S. Senate <sup>a</sup>	4	1
U.S. House of Representatives <sup>8</sup>	9	5
U.S. Army	61	55
U.S. Navy	26	14
Civilian scientists	22	19
Forelgn		
Membership in UN AEC (Australia, Brazil, Canada, China, France, Egypt, Great Brilain, Mexico, Neiherlands, Poland, and USSR)	21	21
British	ş	9
Canadian	4	4
Note:		
a One was badged with zero exposure.		
Source: Reference C.9.208, pp. 3.16	and 3.17.	

Table 18. CROSSROADS observers.

# CHAPTER 12 PERSONNEL EXPOSURES

The total exposure to ionizing radiation of participating personnel during atmospheric nuclear testing was the sum of their exposures resulting from activities that required them to undertake missions in radioactive areas or to deal with radioactive materials, and of exposures resulting from increased background radiation in normally nonradioactive areas. These latter might be created by fallout or as in CROSSROADS by a buildup of radioactivity in the support ships. This buildup resulted from radioactively contaminated lagoon water passing through the ships' saltwater plumbing systems where some radioactivity was retained and by radioactive material being retained by marine growth on the ships' hulls.

#### FILM BADGE DOSIMETRY PROGRAM

The device used to record individual exposures, the film badge, was used exclusively for personnel involved in missions that had radiation exposure potential. The Operation Plan defined the CROSSROADS personnel who were to wear badges and under what conditions. All radsafe monitors and assistant monitors were to wear them when entering potentially radioactive areas. Crewmembers of aitcraft alrborne within 20 nml (37 km) of surface zero from H-2 until H+30 were all to wear badges. The Operation Plan also stated that bonitors were to provide film badges to persons entering radioactive areas (Reference B.0.1, pp, E-II-1, E-II-8, and E-IV-2). Badges were to be collected daily, developed, read, and an exposure record maintained (Reference B.0.1, pp, E-X-2 and E-X-3). CROSSROADS film badges usually were issued for 1 day, but issue periods of 2. 3, or as many as 9 days have been noted.

In practice, badging for personnel other than the monitors and certain aircrews was more complete for personnel doing tasks with an obviously high potential for exposure, such as test-day surveys. Initial boarding of target vessels, recovery of test animals, and early recovery of instruments, than for those engaged in other activities. For example, 50 percent of the crewmembers of PGMs and LCPLs on lagoon patrol (Program V, Project 3) were to be badged (Reference B.O.1, p. E-II-6). During early August, before decontamination of ships at Bikini was stopped, an average of about 100 unbadged personne) worked on USS Salt Lake City (CA-25) in three 2-hour shifts. Each shift was assigned two monitors who surveyed working areas to provide information concerning the time allowed in each area before a tolerance exposure was accrued (Reference C.11.16).

All personnel not badged on these missions were, however, accompanied in the potential exposure areas by monitors equipped with radiation detection instruments. The monitor's function was to guide the work parties away from radiologically 'hot' areas and determine safe stay times in work areas. His pocket dosimeter or film badge recorded a representative exposure for the group he accompanied. A total of 18,775 badges were issued during CROSSROADS at Bikini and at Kwajalein through 31 December 1946. Almost 11 percent of the badges were issued on ABLE-day and about 7 percent on BAKER-day. or the days immediately following each shot. About 38 percent were issued during August when target vessels were being reboarded for decontamination and damage inspection.

Through July and August. 10.431 personnel badges were issued. Most of the remaining 8.344 badges were issued during September and October. Because most badges were issued for only 1 day, some individuals received more than one badge. The number of individuals receiving badges is not presently available, but the Navy Department currently estimates that up to 15 percent of the personnel received at least one badge.

#### Badge-Recorded Exposures After ABLE

Due to the small amount of radioactive contamination as a result of Yest ABLE, 47 of the target ships had been declared clear of radiation by the evening of 2 July. The lagoon was reported as less than 0.1 R/24 hours at 1008 on 2 July. By the end of 4 July most of the target ships had been remanned by their crews. As a consequence of this rapid clearing of residual radiation, the number of persons issued badges and recorded exposures decreased rapidly in the days after the deconation, even though much work was done in recovering test data and in readying the target fleet for BAKER, Post-ABLE exposures are summarized in Table 19. From 8 until 24 July, the day before BAKER, only nine badges were issued between 1 and 7 July read B R (gamma).

Date	No. of Badges Issued	No. of Badges With Zero Exposure	No. of Badges Exceeding Q.1 R <sup>a</sup>
1 July (ABLE Day)	1,627	1,501	6
2 July	274	264	2
3 July	107	105	1
4 July	90	85	0
5 July	16	15	0
6 July	18	18	ΰ
7 July	0		
Total	2,132	1,988	9

Table 19. Badge Issues and exposures following Test ABLE, CROSSROADS.

#### Badge-Recorded Exposures after BAKER

After BAKER in late July and early August, while efforts were made to find an effective means of decontamination, task force personnel were severely restricted in reboarding target vessels by high and persistent levels of radioactivity in the lagoon water in the area of the target array and on the target vessels themselves. As a consequence, the number of badges issued was low during this period.

On 4 August the Director of Ship Material issued fairly detailed instructions for ship decontamination (Reference C.9.185, pp. 4 through 13). The decontamination effort then expanded and with it the number of men issued badges.

The number of badges issued then dropped abruptly after the decision on 10 August was made to end decontamination of the target vessels and limit activities aboard them to recovery of instruments, ship inspection, salvage work, and preparations for towing vessels from the area. However, the number of badges issued then increased as the number of personnel involved with ship inspections grew and towing activity increased. For the rest of the month, the trend of badges issued was downward as target ship and support ship crews departed Bikini. By the end of August most of the support ships had left Bikini. Table 20 summarizes the badge issues and recorded exposures during this period.

The CROSSROADS Bikini badge readings were entered into standard government ledger books, along with certain associated information. The data-recording had several shortcomings. Given names of initials were included with only about half of the last names, and therefore when several entries containing only the same last name are found. It cannot be determined whether they represent the badge reading of one person or several with the same last name. Poor permanship and spelling on the part of the clerks making the entries further complicates identification. Although a ship's name was usually entered along with a person's name, it is not always clear whether the ship named was the one on which the man lived or the one on which he worked as he wore the badge. However, the target ships with few exceptions were not remanned. So if a target ship is named in the ledger it was the place where the exposure occurred.

Other information has been used to supplement the old dosimetry records. Ships' logs, muster rolls, and other personnel lists have been compared with the ledger records in an effort to identify all those who were badged and to accurately total each individual's recorded exposure. Use of these other sources has matched from 65 to 90 percent of the Navy badges with individuals.

#### Badge-Recorded Exposures at Kwajalein

During the ammunition off-loading and inspection phase of the operations at Kwajalein to the end of 1946, the recordkeeping on badge issues was improved. The ledgers were used to issue the badges to the men and to record the target vessel being worked on and the exposure, but a 5x8 card was used to cumulate the individual badge readings from the ledgers for each man. Because the recordkeepers of the time made these cumulations, the problems of handwriting interpretation and same-name confusion are not present.

Date	No. of Badges Issued	No, of Badges With Zero Exposure	No. of Badges Exceeding 0.1 R (gamma)
25 July (BAKER day)	468	189	85
26 July	211	128	4
27 July	287	175	2)
28 July	110	40	25
29 July	180	62	49
30 July	68	23	18
3) July	44	B	9
1 August	40	12	17
2 August	60	19	16
3 August	91	46	18
4 August	81	17	16
5 August	100	15	21
6 August	101	48	19
7 August	107	29	29
8 August	167	59	33
9 August	245	133	26
10 August	190	101	24
11 August	5	3	2
12 August	201	79	32
13 August	280	73	54
14 August	416	329	20
15 August	402	342	7
16 August	543	469	2
17 August	733	682	13
18 August	238	:35	2
19 August	511	158	59
20 August	555	367	38
21 August	386	117	42
22 August	2/1	100	53
23 August	153	53	15
24 August	126	64	11
25 August	78	31	10
26 August	179	151	2
27 August	215	157	1
28 August	54	31	Q
29 August	44	26	i
30 August	59	36	i
31 August	27	14	ò

Table 20. CROSSROADS badging after shot BAKER.

Inspection of these cards on the microfilm record (Reference C.13.4) shows that 699 persons were badged at Kwajalein from 30 August to year end. Nost were issued more than one badge, the highest number observed being 42, and many men had from 10 to 30 badges. Each badge, of course, represented a day's work off-loading ammunition from the contaminated targets of inspecting or mooring or otherwise servicing them.

The periods of heaviest issue were from early September until the end of October. After this time very few badges were issued. The distribution of the exposures recorded during this September through October period is as follows:

Total Exposure Recorded	No. of Personnel With This Exposure	No. in Group With at Least One <u>Missing or Unteadable Badge</u>
0 R (gamma)	121	7
0.0001 ~ 0. <b>4999</b>	498	133
0.5 - 0.9999	68	30
1.0 - 1.4999	4	Q
1.5 or greater	1 (1.52 R)	Q

Seven of the men had unreadable badges.

#### Summary of Personnel with the Highest Badged Exposures for 1946.

An examination of the personnel dosimetry records shows that radiation safety monitors, certain air unit personnel, radiological patrol boat crews, target ship crews, and JTF 1 initial boarding teams were groups with the highest exposures. Personnel from the scientific projects also had a high potential for exposure.

The group with the highest exposures was the radsafe monitors who accompanied all personnel into contaminated areas and were responsible for monitoring radiation intensity of the water and the target ships. This group was issued more film badges than any other single group during the Rikini phase of the operation. The monitors were badged an average of five times each (1.6)6 total badges). One monitor was badged 28 times (on 19 days), and forty-five were badged more than 10 times. The highest cumulative exposure recorded by a monitor was 3.72 K, the highest single day exposure was 2 R, and the mean cumulative exposure was 0.278 R per monitor.

Table 21 summarizes film badge issues and exposure for the monitors. Fiftysix percent of the 1.497 readable film badges had a zero reading. There were 213 readings, or 14 percent, that exceeded the maximum daily allowance of 0.1 R/24 hours. Except for one day, the daily average was below the maximum allowed exposure.

Air unit personnel exposures and patrol boat drew exposures are summarized in Tables 22 and 23. Summaries for target ship drew reboardings for USS New York (BB-34). USS Pennsylvania (BB-38). and USS Salt Lake City (CA-25) are shown in Tables 24. 25. and 26. JTF 1 initial boarding team exposures are

Date	No. of Gadges Issued <sup>a</sup>	No. of Badges Readableb	No. of Badges With Zero Exposure	Average (R)	H1gh {R}	No. of Badges Exceeding 0.1RC
1 July	191	177	156	0.019	2.000	5
2 3ulý	89	60	75	400.0	D.136	1
3 July	18	17	13	0.000	0.050	Ó
Julyd	3	7	2	0.0	0.0	0
25 July	132	130	69	D.044	2.000	24
26 July	77	75	53	0.024	0.309	4
27 July	6-8	66	41	0.030	0.120	5
28 July	39	39	18	0.060	0.376	6
29 July	36	34	16	0.050	D.300	6
30 July	28	25	20	0.028	0.120	3
3) July	30	29	16	0.054	0.240	3
) August	30	29	1)	0.050	0.250	4
2 August	24	23	13	0.070	1.800	
3 August	38	37	17	0.052	0.350	5
4 August	42	42	9	0.073	0.220	14
5 August	43	42	5	0.092	1.300	9
6 August	33	33	1	0.034	Q.660	8
/ August	\$2	50	10	0,142	1,400	16
8 August	46	46	15	0.042	0.240	13
9 August	53	42	19	0.061	0.360	11
10 August	43	40	51	0.052	0.140	2
II August	4	3	3	0.0	0.0	0
12 August	38	27	7	0.073	0.400	
13 August	40	39	11	0.083	0.600	10
14 August	39	2B	21	D. D18	0.28D	1
15 August	43	42	34	0.D08	0.35D	1
16 August	35	34	24	0.020	0.150	2
17 August	- 44	39	34	D. 083	2.000	3
18 August	16	14	8	0.091	0.790	2
19 August	40	37	4	0.045	0.180	5
20 Adgust	51	44	č,	D. D48	0.490	
21 August	33	27		0.068	0.190	7
22 August	32 15	31	10	0.063	0.260	9
23 August	27	13 27	6 16	0.062	9.300	2
24 August 25 August	6		3	0.025	0.120	1
25 August	้ม้	6		0.033	0.050	•
26 August 27 August	6	11 8	B	0.021	0.150	I
	4	4	4	0.036	0.080	ġ
28 August 29 Luonut	;		1	0.032 0.005	0.130	3
29 August 30 August	2	2	1	0.009	0.010 0.040	D G
_				0.020	0.040	
iolais	1,616	1,497 (100%)	836 {56%}			213 (14%)

Table 21. Summary of film badge data for radiation safety monitors, CROSSROADS.

# Notes:

<sup>a</sup>Nineteen muiti-day badges not included.

<sup>b</sup>Some badges that were issued were not readable when processed.

<sup>C</sup>D.1 R/day was the maximum allowable exposure for CROSSROADS.

d<sub>Less</sub> than 10 film badges were issued between 5 and 24 July.

	<b>V8</b> 7	£			BAKE	R	
No. of Readings <sup>a</sup>	Law	Average	High	No. of Readingsa	Low	Average	Higл
15	0	0.020	0.030	12	0	0.050	0.080
29	đ	0	0	1	0	đ	0
40	0	0	0	25	0.060	0.145	0.350
24	0	0	D	None	Identi	fied	
	Read Ingsa 15 29 40	No. of Readings <sup>a</sup> Low 75 O 29 O 40 O	Read Ings <sup>a</sup> Low Average 15 0 0.020 29 0 0 40 0 0	No. of Readings <sup>a</sup> Low Average High 75 0 0.020 0.030 29 0 0 0 40 0 0 0	No. of Readings <sup>a</sup> Average         High         No. of Readings <sup>a</sup> 75         0         0.020         0.030         12           29         0         0         0         1           40         0         0         0         75	No. of Readings <sup>a</sup> Average         High         No. of Readings <sup>a</sup> Low           75         0         0.020         0.030         12         0           79         0         0         0         1         0           40         0         0         0         75         0.060	No. of Readings <sup>a</sup> Average         High         No. of Readings <sup>a</sup> Low         Average           75         0         0.020         0.030         12         0         0.050           29         0         0         0         1         0         0           40         0         0         0         75         0.060         0.145

Table 22.	Film badge summaries CROSSROADS.	{in roengtens)	for air	unit personnel,
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<sup>a</sup>Some badges that were issued were not readable and have been omitted from this display.

Table 23.	Film badge summary (in roentgens) of radiological patrol boat
	Crews, CROSSROADS.

	PGMs (6)					LCPLs (20)		
Date	No. of Readings®	Low	Average	Htgh	No. of Readings <sup>a</sup>	low	Average	Hìgh
<u>м</u> ві, Е								
A July	82	Ó	0.016	0.190	82	0	0.016	0.120
2 July	21	0	0	0	14	0	0.003	0.060
BAKEN								
25 July	53	C	0.076	D.180	81	Ð	0.037	0.240
26 July	28	Û	0.045	0.310	92	0	0.018	0.080
27 July	36	û	0.024	0.250	89	٥	0.049	0.150
28 July	14	0	0.122	0.380	36	0.060	0.085	0.180
29 July	11	0	0.029	0.090	20	0.05 <b>0</b>	0.065	0.130
30 3uly	,				13	٥	0.083	D. 270
31 July					5	0.090	0.094	0.100

Note:

<sup>a</sup>Some badges that were issued were not readable and have been omitted from this display.

\_ \_ ~

Bate	No. of Badges ]ssued	Low	Average	High
S August	ı	¢	0 0	0
6 August	ſ	D. I	<b>0</b> .1	0.1
7 August	4	Q. D7	0.165	0.390
8 August	) 1	0	0.021	0.010
9 August	4	0.03	0.98	Q. 1
10 August	Б	D	0.053	0.08
13 August	3	D	0.04	0.07
15 August	9	Ū	0.041	0.09
16 August	151	0	0.004	0.06
17 August	34	0	0.019	Q.1
18 August	42	0	0.012	0.06
19 August	42	Ø	0.007	0.03
20 August	28	0	0.008	0.05
21 August	109	Q	0.067	0.2)

Table 24. Post-BAKER film badge summary (roentgens) for <u>USS New York</u> (BB-34) reboarding parties.

Source: Reference C.13.6.

Date	No. of Badges Issued	LOW	Average	€l∮gh
J August		0.06	0.05	0.06
8 August	3	0.04	0.063	<b>0</b> .00
9 August	2	0.07	0,105	Q. 13
10 August	5	0.0	0.063	0.07
12 August	1	0.05	0.05	0.05
16 August	24	0.0	0.001	0.03
17 August	46	0.0	0.007	0.05
19 August	130	0.0	0.03	0.1
20 August	40	0.0	0.067	0.17
21 August	19	0.05	0.07	0.09
25 August	6	0.0	0.036	0.11
26 August	42	0.0	0.008	D.17
27 August	43	0.0	0.073	0.6

Table 25. Post-BAKER film badge summary (roentgens) for USS Pennsylvania (BB-38) reboarding parties.

Date	No. of Badges Issued	low	Average	K1gh
4 August	15	0	0.088	0.190
5 August	15	0	0.146	0.320
6 August	17	0.070	0.113	0.230
7 August	4	Ō	0.183	0.400
8 August	29	0	0.105	0.210
9 August	18	Ð	0.159	0.360
2 August	1	0.040	0.040	0.040
3 August	9	0.050	0.064	0.130
7 August <sup>a</sup>				
O August	137	10	0.017	0.080
3 August⊅				
5 August <sup>b</sup>				

Table 26. Post-BAKER film badge summary (roentgens) for  $\underline{\rm USS}$  Salt Lake City [CA-25] reboarding partles.

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summarized in Table 27. Badged exposures for scientific personnel have been summarized in Tables 4 and 6 (Chapter 3).

Dale	No. of	No. of Zero	Average	High	No. of Reading:
	Keadings	Exposures	(R)	(R)	Over 0.1 R
) July	9	9	0.0	0.0	0
2 July <sup>a</sup>	68	55	0.001	0.050	0
25 July	4	G	0.055	080.0	0
26 July <sup>d</sup>	2 5	G	0.160	0.200	2 3 2 7
27 July <sup>c</sup> –		G	0.075	0.160	3
28 July	5	D	0.108	0.160	2
29 July	2	۵	0.130	0.150	2
30 July	11	۵	0.106	0.150	
31 July	4	0	0.247	0.720 <sup>d</sup>	Z
I August	3	0	0.193	0.420	1
2 August	1)	5	0.071	0.420	2
3 August	8	3	0.052	0.120	1
4 August	1	Q	0.110	0.110	7
5 August	1	0	0.125	0.180	3
6 August	2	Ū	0.110	0.120	1
7 August	5	1	0.090	0.140	2
8 August	11	2	0.103	0.240	4
9 August	2	۱	0.020	0.040	0
10 August	2 2	1	0.020	0.040	0
2 August	3	1	0.063	0.110	1
13 August	32	3	0.066	0.170	2
4 August	8	6	0.023	0.150	1
15 August -	4	2	0.015	0.030	0
16 August	8	7	0.005	0.040	0
7 August	7	7	0.0	0.0	0
18 August	5	2	0.042	0.100	0
9 August	7	2 2 3	0.030	0.100	Ō
20 August	5	3	0.024	0.080	ō
21 August	5	1	0.048	0.080	ō
Totals	227	155			37
	(109%)	(54%)			{ <b>16X</b> }

Table 27. Summary of Joint Task Force 1 initial boarding team film badge readings.

Notes:

<sup>a</sup>All badges issued 1-2 July.

<sup>b</sup>Badges issued 25-26 July.

<sup>C</sup>Badges issued 25~27 July.

<sup>d</sup>Badge issued 29-31 July.

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# Badge-Recorded Exposures After 1946 Related to CROSSROADS

The Bikini Resurvey personnel were badged during their 1947 activities. For the over 300 personnel involved and crewmembers of the support ships, from 517 to 572 badges were issued. "There were no personnel exposures in excess of the daily tolerance of 0.1 R beta plus gamma" (Reference C.8.2. p. 101). This is discussed in Chapter 6 in more detail.

Exposures of personnel working primarily on CROSSROADS target ships were also monitored. Table 28 presents exposures at San Francisco Naval Shipyard. Of the recorded exposures at Kwajalein, where until July 1948 the ship security detail existed, the maximum exposure, accrued during 394 hours of work over 10 months, was 0.790 R (gamma), and the average exposure was 0.070 R (gamma) (Reference C.0.30). At Puget Sound Naval Shipyard, the maximum exposure, accrued during 563 hours of work, was 1.380 R (gamma). The average exposure was 0.137 R (gamma) and 0.287 rep (beta) during 20 months of work.

Table 28.	Dosimetry for military and civilian personnel at San Francisco.
	Naval Shipyard for 1947 and 1948.

	Rìgh (R)	Low (R)	Average (R)	Maximum Hours One Person Exposed	Average No. Hours of Exposure
Through December 1941 (128 personnel)				1,032	167
Gamma	4.230 <sup>b</sup>	D	0.039 <sup>C</sup>		
Bela	4.920	0	0.051		
1947 through 1948 (397 personnel)				2,169	518
Gamma	4.060 <sup>d</sup>	0	0.004		
8eta	4.630	0	0.006		

Notes:

<sup>4</sup>This exposure summary was compiled at the end of each year. Personnel who worked both years are included in the 1947-1948 data as well as the 1947 data. Therefore, the total number of personnel from 1947 and 1948 cannot be added to determine total personnel exposed.

<sup>b</sup>Individual averaged 0.081 rem gamma and 0.094 rem bela per day during \$1.8 workdays.

<sup>C</sup>1n 1947, 36 percent of the badges showed zero (gamma).

 $^{6}$  Individual averaged 0.034 rem gamma and 0.039 rem beta per day during 119 workdays.

<sup>e</sup>In combined 1947-1948. 43 percent of the badges showed zero (gamma). Sources: References C.11.25 and C.11.25.

#### PERSONNEL EKPOSURES NOT RECORDED ON FILM BADGES

Only a small portion of the CROSSROACS Bikini participants were badged and even these personnel were badged only during missions that might expose them directly to test instrumentation or test objects that were known or expected to be heavily contaminated with radioactive material. The exposure to the higher-than-normal radioactive background went largely unrecorded. The prime source of this elevated background was the contaminated lagoon water after the BAKER test. However, many participants had little or no exposure to this background. Some lived on Islands distant from the tests and thus had no contact with the contaminated lagoon and received no fallout. Others were aboard ships that did not reenter the lagoon after BAKER, or did so only briefly.

Nearly 50 percent of the personnel did not reenter the lagoon after Test BAKER until it had been declared radiologically safe (less than 0.1 R/24 hours) at 0959 on 30 July. Table 29 summarizes the number of personnel and when they entered the lagoon after BAKER.

Forty-one percent of all participants were assigned to units involved with decontamination, inspection, towing, or salvage. However, only a portion of the crew on most ships would have been actively involved. Many Navy job ratings such as cooks, yeomen, engineers, signalmen, and radiomen would normally have remained aboard the support ship. The 8,463 target ship crewmembers were the most active in the reboarding and decontamination phase. Even then, as indicated in the <u>independence</u> deck log, which lists the names of all boarding teams, only 50 men reboarded from the crew of 343. The <u>USS Briscoe</u> (APA-65) deck log indicates the boarding teams were limited to 29 men from the ii2-man crew. Table 30 compares the ship's missions with their likelihood for contact with target ships for decontamination and inspection.

#### DOSE RECONSTRUCTION

To produce estimated doses for all CROSSROADS participants, a scientific dose reconstruction project has been completed. In this effort, three major sources of radiation were considered:

- Radioactivity of lagoon waters due to weapon debris and neutron-activated radionuclides. such as sodium-24
- Target ship contamination resulting from weapon debrist and neutron-induced activity
- Contamination buildup on the exterior hulls below the waterline and in the saltwater piping of ships operating in the low-level radioactive environment of Bikini Lagoon.

#### Reconstruction Model

Computer models were developed to combine the various radioactive sources with the movement of each support ship. Based upon recorded lagoon water and support ship hull readings, the radiological environment was reconstructed. Exposures were calculated for each ship as it operated in this environment. An integrated dose was determined up to the time that each ship was granted radiological clearance after CROSSROADS. Boses for personnel assigned to recovery

	Support Sh'øt	Jargel Ship Crews	hrmy <sup>c</sup>	Johnt Jask Force L Staff	Mer ine Carps	Diner Units Aboard Shipi	Tota 1
25 July							• •
Ships	49						
Personnel	71,444	943	350	1,274	325	56¢ª	4,920  36X
26 July							1204
Ships	9						
Per sonne"	2.709				155		2,864  7%
yi July							ואין
Ships	1						
Personnel	280						281
28 July							(*1%
Ships	4						
Personnal	342				242		58
29 July							11%
Ships	2						
Personnel	634	2,888					3,52
30 July							192
\$4105	21						
Personnel	6,528	4,632					<b>P1, 16</b>
							(27%
31 July							
Ships	18						
Personne1	1,261						1,261
1 August							1.44
Ships	2						
Fersornes	344						)44  1%
After 1 Augu							1.4
Ships	,						
Personne)	360						36:  1%
kever Reentered <sup>e,4</sup>							1.4
Ships	6						
Per spane 1	3,285		2,300		107	904	6,598 (16%)

Table 29. Number of ships<sup>a</sup> and personnel<sup>b</sup> reentering Bikini Lagoon after Test BAKER.

### Notes.

<sup>4</sup>See Appendix A for details of ship activities.

bTotal CROSSRDADS personnel, 41.894

<sup>C</sup>a)\* Army personnel are assumed to have entered on July 25.

discludes 372 personnel in small units. Enkry date assumed to be July 25.

Or on other atolls.

<sup>4</sup>About 525 aircrew mamabers flew in the wicinity of Bikini on 25 July.

	f requer	Frequent Contact		Not D L'av	Not Directly Involved		Not at After	Not at Bikin) After 25 July
	No, of Ships	No. of Personnel		No. of Ships	ka. af Personnel		No. af Ships	No. of Personnel
Towing/ Salvage/			Command/ Iransports	æ	10,787	Ships	ъ :	3, 285
kepalr Target	36	5,767	Survey/ Destroyers	5	010.1	At Other Atolls		904
Ship Creus Army	92	8.453 350	011ers/ Supply	<b>c</b> 1	1,610	Army Alr Forces		2,300
Joint Task Force 1			Mar Ines/ Seabees		722	Har Ines		101
starr Otspatch and Boat Pool	~	1,269	Radiological Safety <sup>a</sup>	9	1,016			
TOTALS	138	(X11) (X11)		67	18,175 (44%)		Q	6,598 (16%)
Note: <sup>a</sup> High potential for	ial for		radiation exposure but not involved in decontamination.	tovolv	ed tn decani	tamination.		

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Ship and unit missions and involvement with target ship Table 30.

parties or decontamination working parties, which boarded target ships, can be derived from the target ship radiological readings and specific boarding times. locations, and activities. These can be be added to the dose calculated by the models. An example of the methodology is presented in Appendix G.

#### Reconstruction Results

Among the support ships, the PGM crews generally received the highest calculated doses. These ships entered the lagoon shortly after shot BAKER and, for the next several days, helped establish the Red and Blue lines around and within the target array. While in the radioactive water, their exterior hulls below the waterline became contaminated, which in turn raised intensity levels in the interior berthing spaces near the hull. This necessitated that crews sometimes evacuate their ships at night to sleep on other support ships that were not contaminated, although in most instances, skeleton crews remained on board the PGMs. This procedure was effected to preclude the crews from receiving doses in excess of their daily tolerance. By the morning of 29 July, the hull contamination on all of the PGMs had decreased to the point that the crews could remain on board continuously and the practice of evacuating at night was terminated.

Other ships with higher exposures were the tugs and salvage ships that worked among the target fleet. <u>USS Barton</u> (DU-722) crew had higher than average reconstructed doses because of that ship's radiological surveys in the contaminated lagoon waters following BAKER shot. The ships' movements and activities are outlined in Appendix A of this report

Table 31 presents the dose calculated by this model for crews of support ships at CROSSROADS. Table 32 presents the same information for crews of target ships. This latter is made up of exposures while the crews were berthed on support ships and times spent aboard the target ships. The number of personnel in these tables does not coincide in all cases with the crew size indicated in Appendix A because the numbers involved change as more information becomes available. The data in Tables 31 and 32 are more recent, but are subject to change.

#### CONTEMPORARY EVALUATIONS OF THE RADIOLOGICAL SAFETY PROGRAM

The chairman of the Medico-Legal Board that had advised the Chief of the Safety Section entered the following comments in the records after the operations (Reference C.0.5):

[The CROSSROADS operations] were carried through without irradiation injury to any persons. I consider this conclusion well reasoned and founded on a sufficiently broad basis of measurements made by monitors sufficiently skilled and conscientious in their work . . . [Because the board is scattered at the time of this writing.] the conclusion will have to stand as the opinion of the chairman.

In 1966, the former chief of the CROSSROADS Radiological Safety Section wrote a short overview of radiological safety and the operation. Depending upon recollection and records personally available to him (which subsequently have

Wesse) Name/identification	No. cJ Persoquel	Bikini Departure Date	Bikini Reconstructed Oose (rep gama)	Clearance Date	Total Reconstructed Oose (rec gamma)
USS Achomawi (ATF-148)	80	29 Aug 46	1.245	6 Oec 46	1 300
USS_Alax (AR-6)	123	23 Aug 46	D.191	1 Jan 47	0.220
VSS Albergele (AV-5) <sup>d</sup>	569	25 Jul 46	υ	22 Mov 46	U
USS_ <u>A)3en M. Summer</u> (00-692)	2/8	10 Aug 46	0.467	19 Nov 46	0-580
4P(-2/	73	24 Aug 46	C. (3)	25 Feb 47	0 220
USS Appplachian (AGC-1)	₿i4	29 301 46	D.010	2 Qal 46	0.010
USS Appling (APA-58)	276	8 Aug 46	D.116	22 Nav 46	0.160
AKE-29	106	25 Aug 46	0.265	48 (eb 4)	<b>0.30</b> 0
USS Artemis (AKR-21)	36-0	18 Aug 46	0.216	20 Nov 46	0.250
ATA-120	44	25 Aug 46	0.359	18 Oec 46	0 430
4TA-380	45	1 Sep 46	D.547	24 Feb 47	0.630
A1A-185	43	5 Sep 46	0.590	13 Bec 46	0.640
A1A 187	33	24 Aug 46	D.347	6 Nov 46	a. •10
ATA-192	15	2 Sep 46	0.547	te Nov 46	0.590
AT8-40	68	23 Aug 46	0.903	17 Dec 46	0.990
AT&-87	69	1 Sep 46	0.485	13 Dec 46	0.550
USS Avery Island (AG-J6)	483	I Aug 46	0.147	3 Dec 46	0.260
455 Barton (00-777)	26D	10 Aug 46	Q. 519	2 Nov 46	0.530
USS 041610 (APA-33)	428	3 Aug 46	0.060	7 Dec 46	0.140
USS Beggi (4PB-127)	355	3 Ang 46	0.114	30 Sep 46	0.200
USS Benevalence (AH-13)	673	25 Aug 46	0.236	24 Sep 46	0.250
USS Beyar (APA-237)	293	23 Aug 46	D.230	24 Jan 4)	0.280
USS Blue Ridge (AGC 2)	534	30 Jul 46	0 001	22 Nov 46	0.010
USS Bottineau (APA 235)	299	10 Aug 46	D. 178	39 Dec 46	6.740
USS BOURETFUL LAN 91D	585	25 Jul 46	υ	27 Sep 46	0
USS Bowdlach (AGS-4)	296	27 Sep 46	0 143	20 Nov 45	0.160
0506 Bramp1e (1466, 392)	49	24 Aug 46	0.302	22 Nov 46	0.350
USS Burdeson [APA 67]	244	5 Aug 46	D. 066	14 Oct 46	0 110
4155_C+bu (ARG-6)	357	23 Aug 46	0.229	16 Dec 46	8.270

Notest

<sup>d</sup>in Bikini Lagoon only 4 hours after BAKER.

Did not enver BRAINI after BAKEP.

[continued;

Vessel Name/ dentification	Ma. of Personne)	Bikini Departure Dale	Bikini Reconstructed Dose (ren gamma)	Clearance Date	Total Reconstructed Dose (rem gamma)
U <u>SS (Maries P. Ceci</u> l (DD-835) <sup>0</sup>	28)	25 JJ] 46	0	22 May 46	e
<u>USS Chickanaw</u> (ATF-83)	70	26 Aug 46	0.400	13 Jan #7	5.40D
<u>USS Chikaskia</u> (AD+54)	6 <sup>†</sup> f	23 Aug 46	0.19B	34 Dec 46	0.240
USS <u>Chowanoc</u> (ATE-100)	86	28 Aug 46	0.403	* Feb 47	0.470
<u>USS [C7amp</u> [AR5-33]	98	26 Aug 46	0.65)	22 Hav 46	0.720
<u>USŞ Coasters Harbor</u> (AG-74)	195	15 Aug 46	0.195	7 Dec 46	0.240
USS Conserver (ARS-39)	86	5 Sep 46	C.919	4 May 41	0.985
USS Coural (ASR-B)	נוי	4 Sep 46	0.556	10 Jan 41	9.610
USS Crean (ARL-11)	146	21 Aug 46	0.284	23 Jan 47	0.360
USS Cumber land Sound (AP-17)	540	1 Aug 46	0.061	3 Dec 46	0.130
USS Eurrent (ARS-72)	94	25 Aug 46	0.885	6 Feb 41	0.970
USS Dealver LARS-231	84	20 Aug 46	0.952	20 Dec 46	1.03C
USS D1x1c (AD-14)	835	25 Aug 46	0.214	2 Dc1 46	D.230
USS_ Ownton (A65-0)	60	14 Sep 46	0.305	18 Dec 46	0.360
USS 100ree (AJ-69)	152	24 Aug 46	0.198	3 Dec 46	0.240
USS (11ah (AN-79)	36	27 Aug 46	988.D	18 Dec 46	D.750
65 <u>5 1a11 81ver</u> (CA (31)	817	4 Sep 46	0.204	23 Dec 46	0.220
USS (lusser (00-368)	146	4 Sep 46	0.428	77 Nov 46	D. 490
USS Fulton (AS-11)	133	25 Aug 46	D.267	24 Dec 46	0.300
U <u>\$5 furse</u> [CD-882]	293	28 391 46	0.002	27 May 46	0.010
USS George Clyner (APA-2/)	270	20 Aug 46	D.248	22 Nov 46	0.270
USS Gunston Ha73 (LSD-S)	305	25 Aug 46	0.211	8 Jan 47	0.240
USS Gypsy (ARSD-1)	נל	5 Sep 46	0.516	9 Jan 47	0.510
USS_Haven (AH 12)	416	25 Aug 46	0.250	14 feb 47	0.290
8 <u>55 Henrica</u> (APA-45)	+24	16 Aug 46	0.226	28 Jan 47	0.270
USŞ H <u>esperla</u> (AKS-33)	139	23 Aug 46	0.245	28 Jec 46	0 280
USS Ingraham (OD-694)	237	10 Aug 46	0.505	19 Nov 46	0.620
USS James N. 6111155 (#65-43)	¢0	20 Aug 46	0.202	13 Nov 16	0.300
USS John Blish (AGS-"0)	48	20 Aug 46	0.335	15 Oct 46	0.410
USS Kenneth Whiling (AV-14)	539	14 Aug 46	0.195	11 Dec 46	0.230
USS Laffey (00-724)	251	10 Aug 46	0.332	2 May 46	0.440
LCI[L] 977	35	22 Aug 46	0.176	7 Mar 41	0.300

(continued)

Vessel Name/[dent1fleation	No. of Personnel	Qimini Departure Oate	Bikini Reconstructed Dose [rea games]	E learance Date	Total Reconstructed Close (rem gamma)
LC (41   1062	35	22 Aug 46	0.367	4 Jan 4)	6.476
LC[{L]-1067	34	22 Aug 46	0.093	24 Feb 4/	d.220
FCT(4 1-908)	35	25 Aug 46	D.380	18 Dec 46	0.480
USS 1 amr ( 00-770)	744	10 Aug 46	D. 326	6 Nov 46	0.430
USS ( <u>81-3</u> 88	80	25 Aug 46	0.277	5 Dec 46	Q.330
022 721-8-3	63	23 Aug 46	0.182	21 Nov 46	D.260
US <u>\$_L\$T-061</u>	80	24 Aug 46	0.326	6 Dec 46	0.380
<u>USS 151-871</u>	<b>a</b> 1	25 Jul 46	Ò	22 Way 16	0
uss ( <b>š</b> ī_aa)	71	22 Aug 46	0.193	13 Dec 45	D.260
025 LST+989	84	25 Jul 46	a	19 Nov 46	D
<u>USS Mender</u> (ARSO 2)	49	4 Sep 46	0.30/	3 Jan 47	0.360
<u>955 Moale</u> (DD-693)	247	10 Aug 46	0.759	19 Nov 46	0.870
USS Mount McKinley (AGC-1)	824	10 Aug 46	0.193	20 Dec 46	0.750
USS Bursee (ATE-107)	63	29 Aug 46	0.368	18 Nov 46	0.420
<u>USS Neuman K. Perry</u> (DC 883)	280	4 Aug 46	9.185	11 Jan 47	0.36D
<u>055 0'8rien (00-125)</u>	237	8 Aug 46	9,175	6 Nov 46	0.310
<u>USS Oneola</u> (AK BS)	45	26 Aug 46	D.587	11 Dec 46	0.650
USS <u>Orca</u> (AVP-49;	215	12 Aug 46	0.262	11 Dec 46	0.330
USS <u>Ott</u> awa (AKA-101)	67	2 Aug 45	0.060	13 Sep 46	0.130
USS Palmyra (ARS[T]-3)	299	5 Sep 46	0.378	22 Nov 46	0.420
USS Paramint (AGC-13) <sup>b</sup>	591	27 Jul 45	0	22 Nov 46	0
PG4 23	39	25 Aug 46	0.935	16 Jan 4)	1.120
PGM.74	48	25 Aug 46	1.293	13 i eb 47	1,500
PGN-25	53	10 Asg 46	<b>↓</b> .061	28 May 47	1.350
P6# 29	48	10 Aug 46	1.D87	28 May 47	1.400
PGH 31	55	10 Aug 46	0.012	17 Jan 47	1.100
PGH-32	71	tê kug 16	1.045	10 De1 46	1.250
USS Phaon (ARB-3)	160	23 Aug 46	0.331	26 Dec 46	0.390
USS Pallux (AKS 4)	154	19 Aug 46	0.117	29 May 46	¢.150

Note:

<sup>a</sup>Did not enter Bikini after GAKER.

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<sup>In</sup>Not in Bikini Lagoon long enough to become contaminated. \_\_\_\_ 

(continued)

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Yesse) Name/Ident1f'cailon	Ho. of Personnel	 Bikini Departure Date	Bikini Reconstructed Dose (ren gaana)	 Clearance Date	Total Reconstructed Dose (rea gamma)
<u>955 P(eserver</u> (485 8)	95	26 Aug 46	1. 122	18 Dec 46	1.180
USS Presque Tyle (APB 44)	194	19 Aug 46	0.260	17 Dec 46	0.340
U <u>SS Qu</u> ar <u>iz</u> (LX 150)	50	22 Aug 46	0.235	12 Dec 46	0.280
USS Reclaimer (ARS-42)	51	3 Sep 45	1.679	24 Dec 46	1,140
USS Repert K. Huntington (DD-781)	204	10 Aug 46	0.474	19 Nov 46	D.590
USS Rockbridge (APA-228)	206	23 Aug 45	0.334	5 Dec 46	0 400
USS ROCKINGHAM (APA-229)	297	24 Aug 46	0.241	4 Oec 46	0.280
USS_Rockwall (APA-230)	788	19 Aug 46	Q.2C6	17 Oec 46	0.250
USS_ <u>Ro</u> lette (AKA-99)	'51	26 Aug 46	D. 241	28 Jan 47	0.280
USS Salder (CVE-117)	854	4 Aug 46	D.068	28 Jan 47	0 100
USS Saint Cruix (APA-73)	30.6	7 Aug 46	0.072	22 May 46	0.150
<u>USS</u> Sa <u>n Mar</u> ;us ( <b>LS</b> )-25)	631	25 Aug 46	0.249	24 Oct 46	0.280
USS Severn (A0-61)	145	24 Aug 46	0.137	3 Nov 46	0 1/0
<u>USS Shahamaxiy</u> n (AN-88)	36	27 Aug 46	Q.643	12 De: 46	31100
<u>USS Shangr' La</u> (CV 38) <sup>4</sup>	1,935	25 Jul 46	0	22 kov 46	q
USS Shoux (ATF 75)	56	25 Aug 46	0 30 •	28 Nav 46	0.310
USS Sphine (ARL 24)	155	79 Aug 46	C.290	14 Feb 47	0.360
USS Surrork (AN 80; .	43	30 Aug 46	0 564	12 Cec 46	0.730
U <u>SS</u> S <u>ylvanta</u> (AKA 44)	208	25 Aug 46	0.736	1 Dec 46	0.270
<u>USS lelucon</u> (4R3-8)	198	15 Aug 46	0.261	12 Des 66	0.350
USS Tombigoer (ACG-(1)	Hb	2° Aug 46	0.273	31 Dec 46	C.340
<u>JSS Turner</u> (DD-834) <sup>d</sup>	313	25 JU1 46	Þ	22 Nov 46	0
US <u>S <b>ka</b></u> lke (00 773)	242	8 Aug 46	0.21C	23 041 46	0.030
USS Wendtchee (Alf 118)	99	18 Aug 46	\$,301	13 Nov 45	0.390
USS Wharton (AP-T)	493	25 ALG 46	C.245	10 feb 47	D.28Q
USŞ Wä <u>dar</u> an (AS9-1)	66	5 Sep 46	0.637	13 Gec 46	0.690
JSS NYIdcat (AN-2)	128	19 Aug 46	D.172	9 Jac 47	0.230
YPS-354	28	14 Sep 46	0.457	20 Dec 46	0.500
YMS-358	3)	14 Sep 46	D.468	23 Oec 46	0.520
YNS-413	37	14 Sep 46	0.444	20 Jec 46	0.50D
YMS 463	17	14 Sep 46	0.441	20 Dec 46	0 500
Mole: <sup>d</sup> Cid not ente: Bikiri after BAXFR	 	·			

Ship	Crew Size	Support Ship Oosed (rem gamma)	Post-BAKSA Target Ship Boarding Doseb (rem gamma)	lotai Oosef (cen gamea)
nžž Yudeizov (DD-411)	105	9.192	Sank at ABLE	f
1806-221 <u>nopoge 22</u> 1	54	0.248	Sank at BAXER	f
AROC-13	4	Unknown	Sank 4 Jug 46	
<u>USS Arkansas</u> (88-33)	40	0.178	Same at BAKER	ŗ
<u>USS Banner</u> (APA 60)	104	0.262	0.297	0,580
USS Barrow (APA-61)	114	0 223	0.187	0.420
US <u>S B</u> la <u>den</u> (APA-63) <sup>®</sup>	113	0.222	•	0.260
<u>USS Bracken</u> (APA-64)	108	0.263	Q. 177	0.440
<u>ISS Briscoe</u> (APA-65)	312	0.202	0.389	0.650
USS <u>Bru</u> le (A9A-66)	111	0.234	0.635	0.890
ISS Butte (APA-68)	126	0.731	0.422	D.670
USS Carlisle (APA-69)	104	0.005	Sank at ABLE	f
USS Carteret (APA-70)	119	0.219	0.932	1.160
USS Cateon (APA-771	116	0 760	0.850	1.I1¢
<u>JSS Conyng</u> ha <u>m</u> (DD-371) <sup>®</sup>	109	0.495	e	1.000
US <u>Cortland</u> (APA-15) <sup>5</sup>	89	0.228	e	0.260
USS Crittenden (APA-77)	112	0.25B	1.061	1,350
USS Dawson (APA-J9)	119	0.270	a	ď
JSS Dentuda (SS-335) <sup>e</sup>	58	0.693		0.990
USS Fallon (APA 81)	127	0.232	đ	¢
USS FILIMONE [APA-63]"	109	0.209	d	0.250

Table 32. Reconstructed (calculated) dose for target ship crews, CROSSROADS.

Notes:

<sup>d</sup>includes time living aboard support ships at Bikini for ABLE and BAKER.

<sup>b</sup> Includes only those periods the ship was rebuilded after BAK(1) when the ship was not remanned.

<sup>C</sup> Includes dose accrued during time living aboard (arget ship 1) it was remained after ABLE and BAKER. Bickudes also Support Ship Duse as well as dose accrued during return to the United States aboard a support ship or remained target ship. Calculation ends with the radiological rivarance of the ship on which most of the crew was located.

<sup>d</sup>Post-BAKER boarding party analysis not completed at time of printing.

<sup>e</sup>Remained target after BAKER.

<sup>f</sup>Crew splintered to several ships. Individual doses vary.

<sup>9</sup>Only 29 crewmembers repoarded after BAKEP. Individual doses have been assigned.

(continued)

Sh1p	Crew Stze	Support Snip Dose <sup>a</sup> (rew gamma)	Post-BAKER Target Snip Boarding Doseb [rem gamma]	Total Dose <sup>c</sup> (rem gamma)
USS Gassonade (APA-85)	105	0.224		d
<u>USS Geneva</u> (APR-B6) <sup>®</sup>	115	0.230	e	0.276
<u>USS G1111am</u> (APA-51)	91	0.319	Samk at ABLE	f
<u>USS Hughes</u> (00-410)	81	0.314	¢	4
(SS-100) ponebnee <u>vent</u>	343	0.200	0.195	0.420
<u>USS Lamson</u> (DD-367)	119	0.002	Sank at ABLE	
LC1-323	18	0.315	đ	đ
LC1-329	46	0.208	r.	0.260
101-332	17	0.311	đ	4
LCI-62D (officers)	2	0.274	۵	6
101-620 (crew)	14	D.249	d	đ
LCT(L)-549 <sup>0</sup>	22	0.205	•	0.250
LC[[L]-615 <sup>0</sup>	16	0.644		0.360
LSM-60	44	F	Sank at BAKER	f
<u>USS_UST-52</u>	63	0.240	đ	đ
USS 1 \$1-125	56	unknown	đ	đ
USS LST.133	38	0 207	d	đ
<u>USS_LST+220</u>	59	0.256	d	đ
USS LST-545	47	0.224	ð	٥
<u>USŞ LST-661</u>	62	0.229	đ	đ
USS Magrant (80-402)	109	0,284	0,415	0.720
USS Mugford (DD-389)	126	0.255	1.639	1.920
USS Mustin (DD-413)	112	0.274	0.280	0.580

Table 32. Reconstructed (calculated) dose for target ship crews, CROSSROADS [continued].

Notes:

\*Includes time living aboard support ships at Bikini for ABLE and BARER.

<sup>D</sup>includes only those periods the ship was reboarded after BAKER when the ship was not remained.

<sup>C</sup>Includes dose accrued during time living aboard target ship lf it was remanned after ABLE and BAKER. Includes also Support Ship Dose as well as dose accrued during return to the United States aboard a support ship or remanned target ship. Calculation ends with the radiological clearance of the ship on which most of the crew was located.

<sup>0</sup>Post-BAKER boarding party analysis not completed at time of printing.

Remanned target after BASER.

\_\_\_\_ \_\_\_

"Crew splintered to several ships. Individual doses vary.

(Continued)

\_\_\_\_.

\_\_\_

Ship	Crew Size	Support Ship Dose <sup>a</sup> (rem gamma)	Post-BAKER Targei Ship Boarding Doseb (rem gàmmà)	Total Dose <sup>c</sup> (rem gamma
Nagat <u>o</u>	112	0.118	Sank 29730 July 1946	f
<u>USS Nevada</u> (88-36)	403	0.261	1.510	1.790
USS_New York (88-34)	536	0.331	0.908	1.270
<u>USS Miagara</u> (APA+B7) <sup>0</sup>	271	8.197	e	0.230
<u>USS_Parche</u> (SS-384) <sup>®</sup>	61	1.097	÷	2.550
USS Pennsylvania (BR-38)	484	0.255	0.746	1.020
USS Pensacota (CA-24)	354	0.231	0.569	0.610
<u>USS P11atf1sn</u> (55-386)	52	0.209	Suck at BAKEN	f
Prinz Eugen	444	0.229	1,240	1.530
<u>USS Raigh laibet</u> (CC-390)	\$32	8.267	đ	đ
<u>USS Rh1ad</u> (00-404)	104	0.265	d	d
Sakawa	143	0.003	Sank jt ARLE	F
USS Salt Lake City (CA 25)	335	0.330	2.004	1,350
<u>OSS Saratoga</u> (CV-3)	589	0.072	Sank at BAR!R	f
<u>9</u> 93 S <u>eara</u> v <u>e</u> n (SS-196)	58	0.896	÷	1.560
<u>UZS Skate</u> (SS+385)	53	C. 50B	٥	٥
USS_SK1p <u>1ack</u> (S\$-(84)	28	0.230	đ	đ
U <u>SS Sta</u> ck (CD-406)	102	0.239	1.729	1,999
<u>USS irippe</u> (90-403)	135	G.224	Q. 188	0.380
<u>USS luna</u> (SS-200) <sup>0</sup>	57	1.489	c	2.360
US <u>S</u> Watgeright (DD-419)	:48	9.218	6 533	0.160
US <u>S</u> Wilson (0D-40B)	115	0.222	0.910	1,150
Y0-160	<b>'</b> 0	unknown	Sack at BAKIR	
Y0G-03	10	ankeewa	đ	d

Table 32. Reconstructed (calculated) dose for target ship crews, CROSSROADS (continued).

Notes.

<sup>a</sup> Includes time tiving aboard support ships at Bikini for ABLE and BAKER.

<sup>b</sup>Includes only those periods the ship was reboarded after BAKER when the ship was not remanded.

<sup>C</sup>Includes dose accrued during time living aboard target ship if it was remanned after ABEF and BAKER. Encludes also Support Ship Dose as well as dose accrued during return to the United States aboard a support ship or remained target ship. Calculation ends with the radiological riearunce of the ship on which most of the crew was located.

<sup>d</sup>Post-BAKER boarding party analysis not completed at time of printing.

Regarned Larget after BAK(R.

<sup>f</sup>Crew splintered to several ships — Endividual doses wary.

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been retired to the University of California. Los Angeles archives), he wrote (Reference A.6):

On President Harry S. Truman's instructions to Admiral Blandy [I] was to safeguard what was eventually a 42,000-man operation from the "peculiar hazards" of the atomic bomb and was to devise a radiologic defense organization and pattern for both military and civilian operations. At the end of the JTF i operation. It could be said that no one had been injured by the "peculiar hazards" inherent in it.

## REFERENCES

The references are organized in the following manner. Section A consists of references of general interest. Section B contains CROSSROADS planning documents. Section C is comprised of operational and postoperational documents.

In sections B and C, the number following the letter gives a general indication as the type of document. The beadings for B and C are as follows:

- B.0 JTF 1 documents (or no task group given)
- B.2 Navy planning
- B.5 Army-Army Air Force planning
- B.H. Letters, memoranda
- B.12 Newspapers and magazine articles
- C.0 JTP 1 documents
- C.1 Los Alamos Laboratory reports
- C.2 Target ships
- C.4 General Navy
- C.6 Nontarget ships
- C.7 Navy alteralt
- C.8 Bikini resurvey
- C.9 Reports in the CROSSROADS or XRD series
- C.10 Navy messages
- C.11 Memoranda, letters
- C.12 Lectures, interviews, newspapers, magazines
- C.13 Current interpretations of CROSSROADS.

Source documents bearing an NTIS availability code may be purchased at the following address:

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- B.0.6 <u>Radiological Danger Areas for Air Operations</u><sup>†</sup> JTF 1 27 June 1946
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- C.0.1 <u>Enclosure A to Radiological Status of Bikini Non-Target Vessels as of</u> <u>28 February 1947</u><sup>††</sup> ComWesSeaFron 4 March 1947
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- C.0.3 <u>Weekly Report for Week Ending 24 August 1946</u><sup>††</sup> F.G. Fahrion Advance Echelon JTF-1 Z5 August 1946
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<sup>\*</sup>Available from DOE CIC.

<sup>&</sup>lt;sup>††</sup>Undergoing Declassification Review; will be available from DOE CIC.

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- C.2.19 <u>Report of Decontamination Procedures, USS Conyngham (OD-371)</u><sup>††</sup> Commanding Officer to CTG 1.2 19 August 1946
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t+Undergoing Declassification Review: will be available from DOE CIC.

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<sup>\*</sup>Available from NTIS: order number appears before the asterisk.

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- C.9.187 <u>Radiological Decontamination of Target and Nontarget Vessels. Volume 3</u> NTIS AD 473 908\* XRD-187
- C.9.189 (Historical Report -- Atomic Bomb Tests ABLE and BAKER (Operation CROSSROADS). Volume 1\*\* January 1946 XRD-189
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- C.10.9 Naval message 1422382<sup>†</sup> CTC 1.2 16 August 1946
- C.10.10 Naval message 0505442<sup>††</sup> CJTF J 5 August 1946
- C.10.11 Neval message 0803032<sup>++</sup> C3TF 1 11 August 1946
- C.10.12 Naval message 102345z†† CJTF 1 11 August 1946
- C.10.13 Naval message 2023542<sup>††</sup> Safety Advisor 21 August 1946
- C.10.14 Naval message 1006482†† CJTF 1 1) August 1946
- C.10.15 Naval message 1508022<sup>†</sup> Radsafe Section 15 August 1946
- C.10.16 Naval message 1003052<sup>†</sup> Los Alamos Laboratory Kwajalein 10 August 1946
- C.10.17 Naval message 2923362<sup>†</sup> <u>Burleson</u> (APA-67) 30 July 1946
- C.10.18 Naval message 1801342<sup>††</sup> CTG 1.2 to BuPers (ammunition dispersal CROSSROADS) 18 October 1946
- C.11.1 Ltr: S.L. Warren to W.G. Myers<sup>†</sup> 31 December 1946
- C.11.2 Messageform Sept 46 0416492<sup>†</sup> Washington Headquarters 4 September 1946

\*Available from OOE CIC.

<sup>\*\*</sup>Undergoing Declassification Review: will be available from DOE CIC.

- C.11.3 Notebook. Bikini. August 1946 (entry for 10 August)<sup>†</sup> S.L. Warren
- C.11.4 "Command Problems of Atomic Defense Warfare" (speech)<sup>‡†</sup> F.T. Winant, Jr. September 1947
- C.11.5 Ltr: Task of Ammunition Inspection and Disposal on CROSSROADS Target Vessels, Report on<sup>++</sup> LCDR S.W. McGovern to CTU 1.2.12 JTF 1 23 October 1946
- C.11.6 Message: Serial T-346<sup>++</sup> CTG 1.2 to JTF 1 29 August 1946
- C.11.7 Ltr: Radiological Safety<sup>††</sup> OIC Ammunition Disposal Unit to Chief BuMed 11 November 1946
- C.11.8 Memorandum: Comments on Letter of Officer in Charge of Announition Disposal Unit of 11 November 1946<sup>+†</sup> Capt. G.M. Lyon. Safety Advisor 29 November 1946
- C.11.9 Ltr: Safety Regulations for Work on Target Vessels Formerly JTF 1<sup>††</sup> Chief BuMed 31 January 1947
- C.11.10 Ltr: Serial 0169P36<sup>††</sup> CNO to Chief NavPers 15 July 1947
- C.11.11 Memorandum: Conference on Radiological Safety 22 November 1946. report on<sup>††</sup> BuShips 10 December 1946
- C.11.12 Message: September 462417482<sup>+</sup> Kelley, USEO 24 September 1946
- C.11.13 Memorandum<sup>††</sup> CB 1156 to CJTF 1 1 October 1946

<sup>\*</sup>Available from DOE CIC.

<sup>&</sup>lt;sup>††</sup>Undergoing Declassification Review: will be available from DOE CIC.

- C.11.14 Memorandum: Security Guards on Amen, Bikini, Eneu Islands<sup>††</sup> 23 July 1946
- C.11.15 itr: Ser 961 TD/2200<sup>†</sup> W.H. Loeffler to S. Jones Department of the Navy
- C.II.16 Memorandum: Monitor Problems<sup>††</sup> OIC Target Ship Monitors to Chief Radsafe Section 9 August 1946
- C.II.17 Ltr: Ser X-000083<sup>+†</sup> University of California, Serkeley, to Capt. W.B. Walsh, USN 20 September 1946
- C.11.18 Ltr: Ser 000096<sup>††</sup> University of California, Berkeley, to Adm. T.A. Solberg 25 October 1946
- C.11.19 Memorandum: Summary Report of Conditions of Target Ships as of 2000. 4 August 1946. Based on DSM Plot in Radiological Safety Control<sup>††</sup> Radiological Safety Section 4 August 1946
- C.11.20 Memorandum: Annunition Disposal Unit Muster List<sup>††</sup> Commanding Officer <u>Geneva</u> 22 September 1946
- C.11.21 Nemorapdum: Annunition Disposal Muster List<sup>††</sup> Commanding Officer <u>Geneva</u> 1 October 1946
- C.11.22 Ltr (Ser 040S): Radiological Safety Section, Weekly Chronological Report of Activities of Week Beginning 24 March 1947<sup>++</sup> CINCPAC to Chlef BuMed March 1947
- C.11.23 ALNAV #122: Blood Count for All Navy CROSSROADS Personnel<sup>++</sup> 19 May 1947
- C.11.24 Message: ATCONKWAJ to Bumed (1605152)<sup>††</sup> 17 May 1947
- C.11.25 Ltr: A9-4(49921) (390)/Kh<sup>‡†</sup> Commander San Francisco Shipyard 22 January 1948

<sup>†</sup>Available from DOE CIC.

<sup>&</sup>lt;sup>††</sup>Undergoing Declassification Review: will be available from DOE CIC.

- C.11.26 Ltr: A(-4/S99-(5) RAC:j)1. Code 950<sup>++</sup> Commander Sam Francisco Shipyard 1 December 1948
- C.11.27 JTF-1 Letter to commanding officers of ships<sup>††</sup> CJTP 1 9 September 1946
- C.11.28 Letter from Wright Langham to Dr. Herbert Scoville<sup>†</sup> 5 Nov 1946
- C.11.29 Telegram to CWSF from Radiological Safety Advisor AN 12 <u>Haven</u><sup>†</sup> 13 Rugust 1946
- C.11.30 Memorandum: Staff Commander JTF-1. Radiological Advisor to CTG 1.2<sup>+</sup> 13 August 1946
- C.11.31 Memorandum: "Dust Samples Taken in Crew Spaces on <u>Prinz Eugen</u> 9 August 1946," Pill Country Lab to Col. Warren<sup>†</sup> n.d.
- C.12.1 <u>National Geographic</u>. "Operation CROSSROADS" April 1947
- C.12.2 <u>Life</u>. "After Year Ships are Radioactive" 11 August 1947
- C.12.3 All Hands<sup>†</sup> Bureau'of Naval Personnel 1 July 1946
- C.12.4 Lecture<sup>†</sup> Stafford L. Warren 7 October 1947
- C.12.5 Personal interview with Col. Callentine<sup>††</sup> 11 November 1982 (Privacy Act Restrictions)
- C.12.6 <u>Washington Post</u>, "New Blood Tests Ordered for Men Who Were at Bikini" 28 May 1947
- C.13.1 <u>History of USS Geneva (APA-86)</u> during Operation CROS<u>SROADS (1946)</u><sup>†</sup> August 1981

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<sup>&</sup>lt;sup>†</sup>Available from DOE CIC.

<sup>&</sup>lt;sup>††</sup>Undergoing Declassification Review: will be available from DOE CIC.

- C.13.2 Ltr: Beta Radiation Film Dosimetry<sup>†</sup> J. Brady to W.H. Loeffler Reynolds Electrical and Engineering Co., Inc. 18 March 1983
- C.13.3 Ltr: Office of the Chief of Naval Operations to the Homorable Diane Feinstein. Mayor of San Francisco (includes attachment L and internal NTPR CROSSROADS working papers)<sup>†</sup>
- C.13.4 <u>CROSSROADS Personnel Dosimetry Records</u> (printed list and microfilm source records)<sup>†</sup> Reynolds Electrical and Engineering Corp. 1946-1947 (Privacy Act Restrictions)
- C.13.5 Listing of Army Mir Force Units Participating in CROSSROADS<sup>†</sup> October 1982
- C.13.6 <u>Dosimetry Matrix Report, 1946 Pacific Records</u><sup>†</sup> Reynolds Electrical and Engineering Co., Inc. 7 September 1982
- C.13.7 Not Used
- C.13.8 Marine Corps Nuclear Test Personnel Review File C<sup>†</sup> (1983) (Privacy Act Restrictions)
- C.13.9 <u>CROSSROADS Radiological Clearance of Various Ships</u><sup>††</sup> 1 August 1982
- C.13.10 <u>NNTPR Ship Histories</u><sup>†</sup> Various dates
- C.13.11 Memorandum: Listing of the CROSSROADS Target Ships and Their Fate<sup>†</sup> CNO 25 May 1978
- C.13.12 "Plutonium Contamination on the USS SKATE. Operation CROSSROADS<sup>+++</sup> Memorandum: J. Goetz (Science Applications Inc.) to D. Auton (DNA) 24 March 1984

<sup>&</sup>lt;sup>†</sup>Available from DOE CIC.

<sup>&</sup>lt;sup>††</sup>Undergoing Declassification Review: will be available from DOE CIC.

## APPENDEX A

## ACTIVITIES OF PARTICIPATING NAVY VESSELS DURING OPERATION CROSSROADS

## APPENDIX A ACTIVITIES OF PARTICIPATING NAVY VESSELS DURING OPERATION CROSSROADS

This appendix lists the 153 support ships. 84 target ships, and other Navy craft that participated in Operation CROSSROADS. Their crew complements, the dates of their arrival at and departure from Bikini, their distances from the two shots, and their postshot dispositions are given. Crew sizes and Bikini departure dates may vary somewhat from data in Tables 3) and 32 (Chapter 12), which are based on somewhat more expanded research. Activities that are considered important to the conduct of the operation or that had radiological significance are included. Excluded was information on those days that the log entries reflected only routine operations. For example, all ships left Bikini Lagoon on July 18 and 19 for the test BAKER rehearsal, but reference to the rehearsal has been omitted in the ships' activity schedule in this appendix. The ships are listed alphabetically.

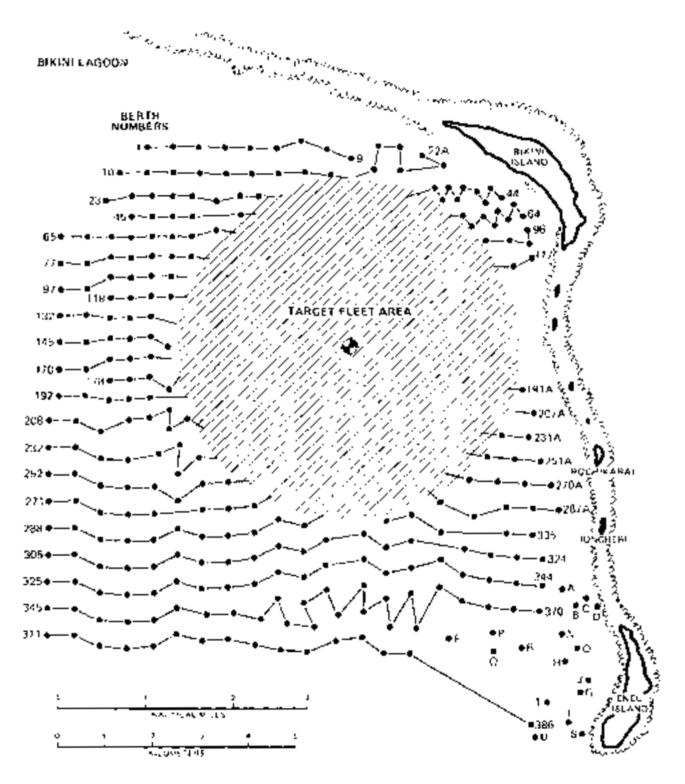
The information in this appendix has been extracted primarily from each ship's log (Reference 1)\* but has been been supplemented by material from logs of other ships and other documents. Information given without citation to a reference may be assumed to be from the ship's own log. Among the other documents useful in compiling this Appendix were two specified in the CROSSROADS OpPlan for each target vessel. These were the <u>Major Damage Report</u> (often referred to as "Report No. 5") (Reference 2) and the <u>Commanding Officers Report</u> (often referred to as "Report No. 11") (Reference 3). In addition, the commanding officer of each target vessel wrote a report summarizing decontamination activities (Reference 4).

Throughout the description of the ships' movements, reference is made to the numbered berths and named lagoon patrol sectors within Bikini Lagoon and named operating areas outside the lagoon. The berths were numbered from I in the northwestern portion of the anchorage area to 386 in the southeastern area. The berths were arranged in long, somewhat irregular west-to-east rows. There were in addition berths near Eneu Island designated by letters or their phonetic equivalent, e.g., Able for A. Jig for J. Oboe for O. etc. Figure A.1 shows the berths and their relationship to the islands of the atoli and the target fleet area.

The lagoon-patrol sectors within the lagoon important during reentry were designated with names of various countries. The sectors were centered on the surface zero point and are shown on Figure A.2.

The operating areas outside Bikini Lagoon used by the ships during the tests were designated with the names of historic automobile manufacturers. These are also shown in Figure A.2.

<sup>\*</sup>References are listed at the end of this Appendix (p. 448).



## ENED CHANNEL

Figure A.L. 81%in% anchorages and target ship area, CROSSROADS.

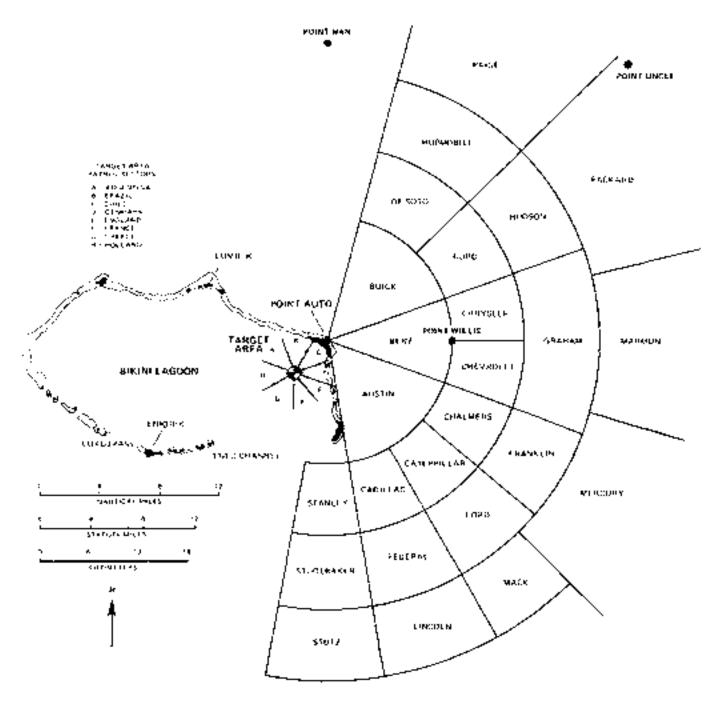


Figure A.2. Target area patrol sectors and ship operating areas for CROSS-RDADS. Target area patrol sectors shown are for ABLE. For BAKER, the Holland sector was eliminated and the England, France, and Greece sectors expanded to fill the area. The ship operating areas shown are in their nominal positions. Before each shot, the shot-time wind was predicted and the areas were rotaled around Point Auto accordingly. For ABLE the areas were rotaled counterclockwise SD<sup>0</sup>; for BAKER, clockwise 30<sup>0</sup>.

USS Achomawi (ATF-148)

	KRZ VCHÓMVART (VALE-140)	10 Bully	Toward target vessel YO 160 to ancherage Deside target ship UCS Makanaas (2011)30.
Erea Size - 93	1	1958	Anonored in berth 75.
	11va): 26 May 1946		
	Jeparture 29 August 1945	նի մակջ	
	14105 27 281 150 kml E	0909 1:45	In virinity of <u>Personals</u> , while <u>Penkarala</u>
	:u11an  } mm+ (22 €=) 5:		shifted berins.
	in Lecashan - San Emprelate	1020-1708	In vicinity of carger ship USA Nevada
	ledfanse: & Docember 1945 :e: P3 December 1946	1/22	(BD 36), while Nevada shifted Derlina. Anceored in Derth 70,
Cearan:	E. B. Lecter de l'Ant	1.07	ALCOUNT IN DECIMAND.
Take links and	Function	12 July	
Adhonours.	a fired steam tog detweet on a support	3707 1117	in victority of target ship USS Seratoge
ship in t	W 1 2.7 (Selvage Onit) under TO 1 2 (Tach		(CV-)), sympating to traving and abiliting
	el Groupé. Les Eunoption was to haw of sal-		berths.
	aged target vessels after the soots and	1152	newbored in beath 76.
CO 11471	tires and take ship repairs.	15 Duly	
5161 ABEE 41 .	lu'v 0905 i	3945 IULS	towed target vessel was 63 to new ann
1	1. 1, 0,04.	0000 1010	charage.
30 2000		1110	Ancoored in berth 76.
1250	Underway for starton outside Tayson.		
		16 July	
1 2014		0800	found Sataloge to new beech.
1253	Entered Birth: Logson.	0923	Accounted to zegith 70.
1140	Approached USS Palmyre (ASBLT) JV to div emback the boarding party.	17 July	Moosed System WW 92. a cadiologically
1425	Steered east of array to clear the three	17 0019	suspect versel. for d-1/2 hours and
	get vebael arcay.		lawed it for 5 newst
1307	Anchored in betth George.		
	•	23 July	
2 July		3060-0900	Cleared lines fouled while maneuvering
0830	Arrived at DE2; Hayan (AH 12) to being		Larget ship dSC Brierow (ASA 65).
2940	ahonad a salvage offiner. Enderway for target ship Sakawa.	094A	Anchored in berth 76
0703	Andreway but target stap sayawa. Andreway an <u>sayawa</u> , which was found to be	Soul 34485 22	5 July, 38351
4100	cettalogically maste.		
0905	Stood clear of Savana.	24 July	
1925	Sexawa to new but slowly alreing.	1254	Underway for a scallow outside the
1040	Satema completely submerged.		harbor.
1343	Tow wire to Sakawa kut.		
1292	Anchused in berch George.	25 July 1006	Reentered the Lagoon.
3. 3619		.119	Anchored in berth C.
01.40	Enderway for target vessel AREC-1:	3000	Underway to: target anty USS Bladen
1 307	An Lived at ANDC 13.		(APR 63).
1317	Towed ASTC 13 to vicinity of Knew Island.	.320	Arclosed in electricy of Blader, standing
2045	Cast off the wire from ARX-13.		by avaiting orders.
1445	Ancoured in berit George.	.321	Proceeded to botth G
6 July		. 1.56	Anchored to beach & esthered conducting solvage activity
0800 3925	Towed Larger ship USS Selt Lake City (CA-		salvage accivicy
THE PLAY	25) and enchared by in beech 164.	76 July	Brood clear of anchorage for about 2
0950	Underway for target ship 333 Pensacole		Secura to allow USS Recharters (ARS 42)
	(CA-24).		and its tow through.
1233	took Synsecole in Low to perch 266.		
2347	Rechard Persecolo.	28 July	Shifted to the anchorage, 1.375 yards
5661 6161 2161 9461	Towed Salt Law Lity to a new anchorage.		(2.3 mm) couch of bernh 317.
.700	Towed <u>Nail Lase Fils</u> to a new orthograph Anchored in Secth 26.	29 July	
		0749	Underway for target submarine USB Synce
7 268Y			(52) 1051.
0690	Underway for target ship 155 folloanden	0531-1007	Traved Skate to Jonnhebi island for woot-
	(APA-11),		lng.
0918	Accived at <u>Crithenden</u> .	1544 1152	Conducted diving operations on Skata.
:07J	Assisted by ATH 61. took Cittlenden in	(A)9 (850	Anchored <u>Skate</u> . Anchored in berth 377,
1:29	tow. Crituenden anchored.	1630	NERVICE IN DECI 1975
1152	Rechard in berth 76.	30 July	
		0145	Underway for target submarines State and
8 201y			USS JUM (08-203).
3547	Duderway for ARDC (13.	64.BC	Began washdown of Skate using monitors
1731	Avrhored ARDC-13 securely.		(fixed, high-pressure water notales) and
1820	Anchored in bernh. 76.		tirehoses.

### USS Achomawi (ATF-148)

Achievant.

30 July

1515 2530 1027 Washed down Skate's pow with drese? fuel Sprayed New York with the solution. att 1705 Anchored near bench 313. 1125 Heyan weatshown of Sente's postsade. :315-1327 Underway for Turne. 6 August Coderway to New York. 0.755 1125 Began washing down Tune. Westwei down <u>funs</u>'s pottside. Westwei down <u>fun</u>s using lye potution under 0900-0905 1517 Sprayed New York with Type solution. 1540 6931 Researed spraying New York. \$936 Boarding Leap No. 1 Doorded New York DEPONDER. 1625 Completed washdown operations. with a tose to continue spraying with 1105 Jucksred in Derth G the nototics. 1.578 Discontinued spraying Mew York, boarding 1) July team returned to achemoral. 6745 8051 Boarding team 40. 2 boarded Sey York to Underway for further washdown operations. Wanhed down Skale with costwaler weing opray with the Sosution. Discontinuos: Aprayley <u>New York;</u> the 0815 1130 two monitors and two additional stream. 1125 boaching team tetutred to Achonaet. and sprayed with sys and bosier compound 5137 SOLL INT. Departed area to conduct an inspection 1005 1600 Washed over three with two wontoors and tour. Sprayed target ship <u>IZES Perseydyari</u>a (BB 38) with ive solution. two additional streams. 1505 1545 1054 Anchored in beach G. 1607-1625 Sprayed Menneyivania with the solution. Detected the give. 1650 L August 0751-0821 5.716 Archared in berth 363. Underway to: Shate 0833 Began rashdorn of Seate. used four streams of seawater on State. 1053 1 August Skyling manadown completed 0952-106**0** F2) 4 Ordeness for Personybusite with buarding teens and montfors. 1225 Underway to target ship USS Stack (ED-4065. 1120 1155 Surayed pains remover solution on Penn-1316 1400 Washed down Stack with midship camptor. sylventa a superstem tore. Pose crew boarned Stage and washed 18 1402-1420 1019-1055 Sprayed paint terminer solution on Peop stivania's perside. Archored in owrth 16. down with Jye solution. 1537 1541 Lye solution sprayed on Stack. 5546 1621 1643 nontroaved stark entdollap and washed down its postside. 8 NOQUST 1657 Underway to betch 245 near USS Marton 0748 Underway for ranges ship USS Trippe (MP-71. ((10)-403) . \$705 Anchored to berth 145. 1020-1038 Sor ayed decontration solution on <u>Er type</u> 1104 1543 washed down fripge with saltwater Z AUQUED 0936 Underway for Stack strees. 1005 1009 Sprayed Stack with Jye solution. 164C Anchered in berth 76. JDL1-3021 Two men boarded Stack. 9-15 August 1038 1043 Reportaved Stark with live enjoying. Approximate to be the 16. 1223-1212 Stock boorded by the coptain. a civilian. and members of the boarding seam. 15 Avenus r 1014-1330 Sprayed Stack with lye and bollet con-0839 Undy; way to Perceptional a. pound solution. Returned to berth lb. \$645 1050 (1)52 dorwyed Stark with lye and bolter con-1125 Anchosed. pound solution. nosted down Spack a portaide with soll 1420-1435 17 August water. 0845 Wenz alongside Penn<u>sylv</u>ania to pick up a 1441 1504 a party look (weddings on Stock) boarding and working party of 1 officers Underway to berth 377. Anchored in besch 377. 1515 and 37 may 1634 11LB Underway for anchorage. Accived at anchorage. 1125 3 humant 1457 Underway to swing Pennsylvenia eround. 6731 Underway for Stock. 1526 Turned Percisylvania asound. 0640-0912 kashed down Steck with seltwater. 1630 Cast off fine from Pencyalvania. ConContrated on Stack's postside, Analysed in a berth 1,915 yards (1.3 km) 0957 1055 1705 Anthored in berth 16 \$207 south of beesh 33). 19 Acguer 1017 Toox target ship USS (<u>News</u>on (APL-79) in 5 Nugast cow for kwsjalein Acoll. 0850 1050 indexway for rangel whip use New York 188-36) with boarding teen members. 21 August A civitian boacded any Took 1056 \$100 Anchored <u>Sunson</u> in Residue in Seycon-Sprayed New York with the solution. Sprayed New York with the solution. Sprayed New York with the solution. 1102-1122 1056 Underway for Diking Maoii. 1159 1201 22 Assessed 1213-1221 Washed down New York with sailwater. a civilian boarded New York. Boarding teap boarded Hew York. 1316 1356 i115 Anchored at Bikini Acoli. 1358 departed for Resjalein Reall with new 1422 1405 York in tour. Boarding team and civilian returned to 1590

## USS Achomawi (ATF-148)

## USS Albemarle (AV-5)

24 August (018 (425	Acchored <u>New Yo</u> gk at Kenjels)s Reoll. Underway for Bibls: Atobi.	38 July 3707	Anchored at Bikini Atali in berth 207.
	Sizertal to: Billio: Acourt	2 Andrest	Salstfreet to Salerth 185.
25 August 8720	Arelyed at Pikini Aroll.	T Kagust	Shifted to berch 201.
20 August 1005	Underway with carget ship (55) harrow (NPX-61) to the.	.2 Jugust	Personne, truc carget ship USS Indepen degge (CVI-22) came aboard <u>bjan</u> for metting and heptbling.
21 Auguri 1367 1761	Assived at Kwajajoto Asoij. Uedanowy toe Bisint Asoit.	16 August	Shifted to anchorage located between besths 9) and 214.
28 Augus: 0919	actived at Miking Rioll.	16 Acquet	Some f <u>oderendence</u> personnel treasfected to USS <u>(Artemis (AUA-21)</u> for cranspart to peat) befort.
29 Kuqusir	lef: for Kewjajeje kisil wyrb carger unip 758 t <u>\$}ri</u> ss tr tee.	23 Мирике 1350	Departed for Awagalash anos
70 <b>Lugi.sr</b> (515	Avec from (eff. <u>1.57-1.</u> 1.).	24 Nuquer 1170	Attived Residents Atol.
J Septosper (615	Departed for Pearl Hattat.	28 Magust 1963	Departed Swajaled). Atold after embarking personal for framepoit to Pearl Harbor.
Crew Skae:	(8-94) <u>8414 220</u> 253	6 September 1035	Arcawed wit Pearl Karber-
Bletht Acold	Arriva": 1 May 1946 Orbariure - 21 August 1946		<u>USS ALBENARLE</u> (AN-S)
SMON BARIA I	cathon - 16 mm (30 km) 444 acathon: 15.5 mm (29 km) 440 Ann anns ann (29 km) 440	Crea Stre: 1	
Shok Bakîfî i Deconianînas Operation/i last ditî ar ajak, a are Sec toviog, equişpe airatio	ocation: 75.5 mmt (29 km) 140 Yok Jokatick, San Diego Cleanan:n: By ' January 1943	Bielmi Ktoki Bielmi Ktoki Siot Adlt Loc Siot BATLA Lo Deconlaminali Final Citation Take Unit Loc The peop (Loborat	Arrival, 4 May 1948 Geparture 25 July 246 Satlan: Anchored 45 2003/eth Alphi Satlan: Perf 125 km/35t [Erea CH2:meis] San Jostikon Los Angelen Satl 37 22 Movember 1945
Shok Bakîfî i Deconianînas Operation/i last ditî ar ajak, a are Sec toviog, equişpe airatio	acation: 15.5 mm [29 km] [40 Non .ocation. San Diego Clearante: By ' January 1983 4 function - Repair whip. Wes part of the L.A.M (Sepair whice Units). Its functions were mailwaging, and emergency repair work. It also was d with leveling apparatus for capid detect a of the name life storage period of any maple sectories gutpowers	Bieloi Ktoki Giatol Atoki Siot Adat Lao Siot Batta Lo Decontaminati fibral Citatar Take Unit Are The peap (Latoara) Lisen fu	Arrival, 4 May 1948 Geparture 25 July kits Sation: Anchored at kwajaleto Ajoli Sation: 26 Arr (15 km) 16t (Krea Chélmeis) Son Lotalkon Los Angelen Sation otalkon Los Angelen Sation Arrobe: National Page Function place tender: A <u>lognorie</u> agrived in TV (11) place tender: A <u>lognorie</u> agrived in TV (11)
Shok Bakîfî i Deconianînas Operational Last Juli ar Ajak, a Anet Sec Soving, Aquişipe Alastic Questio	acation: 15.5 mm [29 km] [40 Non .ocation. San Diego Clearante: By ' January 1983 4 function - Repair whip. Wes part of the L.A.M (Sepair whice Units). Its functions were mailwaging, and emergency repair work. It also was d with leveling apparatus for capid detect a of the name life storage period of any maple sectories gutpowers	Bielni Ktoki Ginini Jtenki Sinoi Adit Lac Sinoi Batta La Decontaminati Fingl Citarar Take Unit Enc The peop (Lateorat Lisen to the weap Shot Adit 41	Arrival, 4 May 1948 Geparture 25 July Kida cation: Anchored at Kwajalens Ajoli bootston: 26 Arri 155 km 165 (Krea Chaimers) Non ocalises for Angelen ten: 3y 22 November 1948 is Function place tender Al <u>bemarie</u> arrived in TVI [.1] tery Units, it contained laboratory facili- so the technical group. It also temported pons and provided assembly facilitates. July, OSAD
Shok Bakifi i Deconianinas Operation/i Last Juli an Ajak, a And Sec toring, equippe etratio questio Shot Aiul (1 3) June 3417 J July	ocation: 15.5 mm [29 km] [40 Yok Location: San Diego Clearan:n: By ' Denuary 1983 4 function reparts whip: Wex past of the L.A.M (Sepal: which Units). Its functions were mailwaging, and emergency repair work. It also was d with immuting apparence for capid denue a of the name life storage period of any mable sentences gutpowders July, CSUGY Underway for station outside Legeon	Bielni Ktoki Ginini Janki Shot Ağıt Lac Shot Ağıt Lac Deconlaminati Final Çimaran Tase Unit zec The ema (Laborat Lisen fü sho emap Shot Ağıt 41 1 July	Arrival, 4 May 1948 Geparture 25 July K148 Setton: Anchored 41 Kwajaleto Aloli Setton: 26 Mari 105 Kmjaleto Aloli Son Jotikon Los Angeleto Son Jotikon Los Angeleto Son Jotikon Los Angeleto Setton: 37 22 Movember 1945 S Function place Render A <u>lognorie</u> arrived in TVLL1 (or Singleton Alognorie Alognories) Sons and provided assembly Sections.
Shok Bakiri i Deconionionas Operational Last dati an ejax. a net Sec social security equippe estatio gneestic Shok Aiti (* 3) Jone Shok Aiti (* 3) Jone Shok July Salz	acation: 15.5 min [29 km] [40 Son .ecation. San Diego Clearan:n: By ' January '943 4 function repairs whip. Was part of the L.A.K (sepal: whice Units). Its functions were naiveging, and emergency repair work. It also was d with leasting apparetus for supportion of any mable santwises gutpowders July, C900) Underway for station outside Leguon Anchored in Genth 200.	Bielni Ktoki Ginini Jtenki Sinoi Adit Lac Sinoi Batta La Decontaminati Fingl Gimaran Take Unit Enc The peop (Lateoret the weap Shot Adit 41	Arrival, 4 May 1948 Geparture 25 July Kida cation: Anchored at Kwajalens Ajoli bootston: 26 Arri 155 km 165 (Krea Chaimers) Non ocalises for Angelen ten: 3y 22 November 1948 is Function place tender Al <u>bemarie</u> arrived in TVI [.1] tery Units, it contained laboratory facili- so the technical group. It also the technical pons and provided assembly facilitates. July, OSAD
Shok Bakiri i Deconioninas Operational Last Juli an Ajak. a And Sec Shok Ajul Shok Ajul July 1 July 2 July	ocation: 15.5 mm [29 km] [40 Yok Location: San Diego Clearan:n: By ' Denuary 1983 4 function reparts whip: Wex past of the L.A.M (Sepal: which Units). Its functions were mailwaging, and emergency repair work. It also was d with immuting apparence for capid denue a of the name life storage period of any mable sentences gutpowders July, CSUGY Underway for station outside Legeon	Bieloi Ktoki Gini Atoki Shot Adat Lac Shot Adat Lac Decontaminati Fingl Citeater Take Unit And Take Unit And Take Unit And Clathered Lisen fu che Weag Shot Adat 41 1 Juay 4 Juay J002	Arrival. 4 May 1948 Geparture 25 July kids sation: Anchored at kwajalens Aloil bootion: 28 wer [15 km] Bit [Krea Ch2:mers] bon otalises los Angeles ree: 3y 22 Movember 1945 s Function place tender Al <u>bemorie</u> served in TV [.1] tropy Unity. It contained isbornory dati- se the technical group. It also thereported pons and provided assembly facilitates. July, OSHO: Anchored at Avajalein Atoll.
Shok Bakiri i Deconionionas Operational last dait an ejax. a net Sec toring. equippe etatio questio Shok Aiti (* 3) Jone Jati July 2 Joly Personnel to 500 Alts.	acation: 15.5 min [29 km] [40 Son .ecation. San Diego Clearance: By ' January '943 4 function repair whip. Was part of the L.A.K (sepal: whice Units). Its functions were mailweging, and emergency repair work. It also was d with leasting apparents for sapid detect a of the name (its stronge period of any mable samewiess gutpowders July, C900) Underway for station outside Leguon Anchored in Gerth 210. Shilled to berth 200. Taratess occurred for several days after	Bieloi Ktoki Gini Atoki Shot Adat Lac Shot Adat Lac Decontaminati Fingl Citeater Take Unit And Take Unit And Take Unit And Clathered Lisen fu che Weag Shot Adat 41 1 Juay 4 Juay J002	Arrival. 4 May 1948 Geparture 25 July Ki48 Cation: Anchored at Kwajalein Aloil Cation: 26 Arri (15 km) 185 (Krea Ch2:mers) Son. Ocalison (18 kmg/len Krea Ch2:mers) Son. Ocalison (18 kmg/len Krea Ch2:mers) Son. Socialison (18 kmg/len Krea Ch2:mers) ref: 3y 22 Movember 1945 is Function place tender Al <u>bemarie</u> arrived in TVI (11) place tender Al <u>bemarie</u> arrived in TVI (11) Archoced at Availation Acoli Archoced at Bisini Acoli in Derth 40.
Shok Bakiri i Recontaninas Operational Last dait an ejax. a net Sec towing. equippe wheatio guestio Shok ASUE (* 3) Jone JALT J July Personnel to Shok Barris (	<ul> <li>acation: 15.5 min [29 km] [M]</li> <li>Sch. Scatten. Sam Diego</li> <li>Clearan: P: By ' Denuary '943</li> <li>d function</li> <li>Repair whip. We part of the Lifth (Sepair whice Unit). Its functions were waiveging, and emergency repair work. It also was d with leasting apparatus for capid detect a of the name life storage period of any mable sectories guippenders</li> <li>July, CSUD:</li> <li>Underway for starton outside Leguon</li> <li>Anchored in Gerth 200.</li> <li>Shilled to Derth 200.</li> </ul>	Bielni Ktoki Ginin Athli Shot Adat Lao Shot Battig Lo Decontaminati fibrai Citatian (Lateana Litera i ethe weap Shot Ad.L 41 Li Juag d Luag Job2 Shot Rakee (2 25 July DSP) 1441	Arrival. 4 May 1948 Geparture 25 July 2948 Geparture 25 July 2948 Getton: Anchored at 20032210 A(0)1 Scation: 30 Arr (15 km) 351 [Erea (2420001) Scation: 30 Arr (15 km) 351 [Erea (2420001) Scation: 30 Arr (15 km) 105 Free Strategy (24 arr (14 km)) Scatter technical group. 24 also therepointed point and provided assembly facilitates. July, 0980) Anchored at Swajalein Atoll. Anchored at Bikini Acoli in Derth 40. 25 July, 08351 When May to Jis operating area east of the Lagoon. Anchored in Becth 268. Baking Acoli.
Shok Bakiri i Deconionionas Operational last dait an ejax. a net Sec toring. equippe etatio questio Shok Aiti (* 3) Jone Jati July 2 Joly Personnel to 500 Alts.	acation: 15.5 min [29 km] [40 Son .ecation. San Diego Clearance: By ' January '943 4 function repair whip. Was part of the L.A.K (sepal: whice Units). Its functions were mailweging, and emergency repair work. It also was d with leasting apparents for sapid detect a of the name (its stronge period of any mable samewiess gutpowders July, C900) Underway for station outside Leguon Anchored in Gerth 210. Shilled to berth 200. Taratess occurred for several days after	Bieloi Ktoki Ginin Atoki Shot Adat Lac Shot Adat Lac Decontaminati fibral Citeater Take Unit Are Take Unit Are Julian Jul	Arrival. 4 May 1948 Geparture 25 July kits cation: Anchored at kwajzieto Aioli cation: 28 wri 105 km 35t [Area Ch2:meis] Non octation ios Angelen rer: 3y 22 Movember 1945 a function place tender: A <u>tomorie</u> served in TV [.1] tery Unis]. El contained laborniony dati- act the technical group. It also tientported port and provided assembly facilitates. July, 0980; Anchored at Awajalein Atoll. Anchored at Bisini Asoti in Derth 40. 25 July, 0835; Underway to Jis operating area east of the Lagoon. Anchored in Derth 268. Raking Atoll. Underway for Evejajein Atoll.
Shok Bakiri i Recontaninas Operational Last Juli an ejax. a net Sec souting. equisite quistion Shok ASLE (* 37 June July 1 July 2 July Personne) to Shok Bares ( 24 July	<ul> <li>acation: 15.5 min [29 km] [M[ Yok . acation. Sam Diego Clearance: By ' Denuary '943 4 function reparts whip. We past of the L.A.A (Sepal: whice Units). Its functions were waiveging, and emergency repair work. It also was d with immuting apparatus for capid detect a of the new life storage period of any mable samkwises gutpowsers Duly, CSUG: Underway for starion outside Lepson Anchored in Gerth 200. Shilled to Derth 200. Shilled to D</li></ul>	Bielni Ktoki Ginini Jenki Shoti Adat Lao Shoti Adat Lao Decontaminali Final Climate Task dait are The weat (Laborat Liferi fu ethe weat Shoti Adat 41 1 Judy d Judy JOD2 Shot RAKER (2 25 Judy DSF) 1441 (0035	Arrival. 4 May 1948 Geparture 25 July 2948 Geparture 25 July 2948 Getton: Anchored at 20032210 A(0)1 Scation: 30 Arr (15 km) 351 [Erea (2420001) Scation: 30 Arr (15 km) 351 [Erea (2420001) Scation: 30 Arr (15 km) 105 Free Strategy (24 arr (14 km)) Scatter technical group. 24 also therepointed point and provided assembly facilitates. July, 0980) Anchored at Swajalein Atoll. Anchored at Bikini Acoli in Derth 40. 25 July, 08351 When May to Jis operating area east of the Lagoon. Anchored in Becth 268. Baking Acoli.

## USS Allen H. Summer (DD-692)

	<u>16</u> 95_al <u>1.1a_4.</u> Sij <b>ta</b> (00.692)	2(2)	Set course and purchased to reacte six tion at Point Segar.
Liew Stre	278	25/14	Laying to at Point Sugar.
Bikini Atoli		7927	Propeeding to station at Point Sugar
Riktol Acei	Departure. 10 August 2586		
	pracion. 19 mmi (35 mm) é	30 Južy	
Shet BANKA (	ocalion: 10 mml ()5 tm) 5!	C 250	Proventing to condervate at 3194219.
Beconigehaut	New Caralion: Puget Sound		[6594818] Conducted tensional news; rep
Oceral tone i	Clearance 19 November 1946		precipes to tots area in company with
Sinai Cleara	ante, AC Danuary 1990		u <u>e, inglaha</u> n (00-694) and USS Robert K.
			15_11_114_102_000+3631.
Mank Mont an	nd turvition	אורר וו	
	Chronyby Suggest writers as a support ship in	2955	Desceeded independently and stood into
	ver Division 🖓 in TO 1 / (Subface Pater) -		part.
[15 fu	norman was to patrol the ates around the	2000	Repred to 033 Enorgy for refuring in
a1011 a	and allow and the kno covalougeaphile and earlier -		berch 195.
206144	i lask unit	1210	Underway for terth 141E.
		3526	Avenored in beach 141E.
5601 #3C2 ()	1912, 09001	IS July	
i Juir		0615	Undermay for Robert Sugar
1 249	En route to conduct tadiological and	10)4	Anchered in beith 1478.
	oceanorganitic operation (Palmotive Opera	1011	esta esta da la construction de 1965
	aties)	•8 July	
1639	Answerd in Rigidi Aroli setween berths	101	Underway whi nable to HSCV bench 500.
	93 atd 114	120e	Anchored for Gerro 195, siter relieving
			1955 Flywer (00 186) as 102.V.
7 Suiv			F -
6940	titilarway to colleve 1853 yodd Maree 183	19 July	
	111) an Asthon Entrenne Central Versel	65.25	their way, proving to form Sugar
	(RECV).	1015	Recurred to live of Energi (\$2and; continued
1944	Anchored for berth JRS, BSKabl,		steawing as before to reiveve Fail Wiver
1 July		1422	as new at bikint. Anchored to besth 386 and collected Pall
6.51	Wederway in Search of an Euri-with person	142*	where as ICO,V
14.6	nel aboard, adrift off Entérit Esjand.		
: 839	Intercepted mystege from Ltt Andry Island	21 July	
	THE 165 to CUTE I to the effect that VSS	100-6	Underway alter being fellowed by taffey
	u'Brien (Bu-125) had encovered presonant		(00-124) as HECV Proceeding to beach
	a04 1479.		1416.
1411	Approaches O Usign 1.000 Youds (910 Mor-		
	ters) south of Shidrak Jawanki.	22 July	Underson for Mariatala bandi tan asawa
1946	Laying to receiving passengers from	1655	Underway for Manipulain Actil for persons pel transfers.
2019	OfBrien and securing LCS-C29 in row. Congressy with time:		ser crassers.
1246	All england stapped, game trains the	<ol> <li>Joly</li> </ol>	
	parced. Competited transwering to secores	6651	Rechards to anchorage burth C. Wwajaluta.
	1 Cm c 29	1557	obde/way to conduct facticas bandover
2328	LCR-C29 recovered and recovery crew		exercises simma route to BikinL.
	abound for meaning.		-
		24 Voly	
4 July	and a second second second second second	8609	Noted purchide to Knoren an breth 1/4.
0721	anchored at Rikavi anali in berih 360.	A.4.	Nikini. for tefueling.
<b>.</b>		0:47	Distributy to berth 24.22.
6 JUJY 1075	Underway to new anchotage.	1612	Six winitary swi civillan petaonnel re- ported aboard in accordance with varbail
1122	Anchozed 200 yards (183 #viers) north of		outers of Rediciogical Seferic Section
	bertin 169. Boato:		JTF ).
		1352	Charles to acknew MRTV Cuty.
8 9419		li30	Northwood in Derith 186, (Minin)
<u>Ö</u> Rh I	Underway for Hossic Conjer Sciencegraphic		
	Brunel.	SUCH RANIN	[75 July, U235]
1031	Maneuvering to get on station for economy		
	graphic (wscs.	25 July	
9101	Laying to at Point Sugar.	2540	andriway from berrn 186 to Poing Sugge.
1448	Conferencing find programmed into the registric station.	1647	Singged at any new laying to while tak
: 576	Point Sugar tou comanographic rest Mb2 engèses stepped, saying to at Point		ing Grep-Water samples for radiological tosts actailde Alkion Accol.
	Sugar for exinancy sugar rests.	1714	Set marse and proceeded to Mikipi Argui
	and the second of the second		tor night contracting.
9 Joby		1500	Anchored by Rivini Atolic accus 2 272 ren
0824	Laying to, conducting occarry apply		IA & by worth of surface area
	crashliq.	2254	Underway for new burch.

## USS Allen M. Summer (DD-692) 25 July

AnkApped Up new bestal-

anctinited to new beeth.

Underway we shafe beeth.

Anchored in perch 313, Bigint,

warlnes points in the stall.

CONTINUE TO 11932 N. 165932 P.

conduct radiological sents

indexway to take deep water soundarigs at

Laying to while conducting oceanographic

tarying to still a conducting devanage apMs

saying to white conducting oceangraphic

Completed result, proceeding on various

Anchored at 11952 Nº 185932"A ter oceano

Chiefway to 11932 w. (ASO3) 5 Anthones In Birts: Acol. to complexit

Ancies with an exaction 5. Miking Acoll. 10

Complated radiological costs made all

inderway to transitione of which above  $12940~{\rm N}_{\odot}$  (65928 S E.

Leying to it oil slick, senting sample

Sample of water should BD timps tolerable

Leaving oil siller. Underway to entrance

thelegeny to shift berths due to radio

activity in enters of collectore and coavoid excessive exposure to radiologica.

Underway to sadialogical station 5.

preparations for genting underway.

Anorabed to beyth 369. Bikini.

of wares for radioacrivity.

Anchored in Derth 360, Birson,

Underway proceeding to beach 3148. Anchused on berch 354m. Mtklm1.

(8.0 9/24 Norse).

of Blains Acoll.

404 LV189

tests in position (1932)W. 1059301E.

tests in position (1932 N: 165921'F

indecway to shift becas.

230**9** 

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0921

0745

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16)5

. 124

2,230

1905

1875

1912 1978

2013

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2520

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1479

1915

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16)2

1403

1612

234 N

0350

1951

28 July 1550

29 July 0130

27 Juby

Letts.

prophic resea

oceanographic cents.

Underway to beach 369.

26 GUNY 0124

Underway el	to ge	a i onge 1 de	<u>urki D</u>	<u>  1   4</u>	( <b>A</b> D-
		d side ta	018 <u>1</u> 0	15	besti.
Underway	Lot 4	alosijside 10 besih -		10	berth
		n C. HLYL			

2 Lugust

a 728

0054

1445

1215

1 August 3776 Enderway from perch G. Bikind, to go whenesside cludo. 0749 Housed scarboard slife to Jimle in Detth

363. B5%3n1.

7 Require 0742 Underway standard our of parbox to join. USS MORTH 100 0951 (at uttage firtha practice off Eneu Island. ,445 Arthoughd in heter 1976, Bikini,

- 9 AG7253 0716 · inderway from anchorage beach 1478 to fuel whip as berth 324. 3745 Roozed starboard side to gange in twith 324. Bikini, for retueling.
  - 2845
  - Underway from Ensities to barth (41E. Anthored in barth (41E, 2005). 0917
- .0 August Orderway from Secth 14/6, Bikini, to join 0.150 logggher. Noeje, Huttington, Laffay, and UNS Lowig (DO-770) to conduct firing runs, en couve trow Sikini to Pearl Marhor.
- 15 August Account Press I Hectory

#### 155 ANCERSON (00-411)

Grew Skap: 105 Bacton Aqu'n Anninal: Before 50 June 1946 Grew Location for Shot ABLC. US<u>S Rockbridge</u> (APA-33) USS Payfield (APA-378) Free Landling for Shot BARMA, USS Alam (APA-378) Free Landling for Shot BARMA, USS Alam (APA-378) 750 yards (655 malers) S SUME I July 1946, British Alail

lask Urli and Eurotion The descroyer Anderson was a target vessel during CROSSBOADS its free was transferred before APLE and was never reluced. It served in Sestroyer Gaviation 1 in 10 1.2.3 (Destroyed Unit). Anorgan was instrumented with microphones on its deck to pick up the sound of the employions.

Shot #848 (1 July: 0900)

Andproof a cross was transported to the above-noted ships, which were to aske Maraka (2) and 139 km) easts of ABLE shot site Shot ABLE sank Anderson, Stying operations were conducted lates to examine the ship.

#### MPL-2T

Drew Stret: 23 Bitins Departure: 24 August 1946 Geroniamination Location: Kvajalein Atoli Operational Clearance, 25 February 1941 Fine' Clearance: 10 Nurch 1947

1523

1241 Aschored to beach D. Birtal. 1765 Five silicary and divilian personnel disembarked by vestal authority of the Hadiological Hafety Serijon, C-TH ...

Anchosed in Serth 1538, Bikini, Underway to srand out of horbot.

Auchored in Certivity, Bistoff.

Underway to shift berths.

#### 90 JUJY

2649 Dedonway proceeding to Residuate Atosi. Appended in Berth K-16. Residein. 1546 Underway from betch #-16, Kwajalein, to : 151 Bigink Mach.

#### 31 July

Monored steetboard wide to <u>USS\_Onlikasking</u> (AD-54) In Death 250 for refueling. 0811 underway from elongelde Chikaskia pro-6914 ceeding to beach 141. 0956 Anchored Detween beach 1479 and 145. Dikter.

Fask Gene and Function APL-21. a non-self-propolled barracks ship, was a rember of TU 1.2.12 (Knajalejn Anthronomice Shibi). It was used as a decouragination station of Kes jejetn and was net at Bikink for eithet shot.

July 8 Regest #1 Swejslein.

- 4 ANNUEL Taken in the by <u>this strate</u> (ATP 15) to Bikini.
- 10 23 Bugust Moored alongside target vessel 986 Geneva (REW-86).
- Taken in row by htp-8/ for Kwsjaletri. 24 August
- 25 August anchosed in Realaters, beach 27.

APL 27 cenained at Evelatetr vall) July 1947.

#### USS APDGCH (55-300)

Crew Stre: 54 Biktel Atol: Arrivat. Refore 30 June 1946 Crew Localium foi Shui ABLE: <u>USS Bollineau</u> (APA-735). Crew Localium foi Shui ABLE: <u>USS Bollineau</u> (APA-735). Shol ABLE Localium foi Shui BALA: Bottineau Shol ABLE Localium: 1,000 yards (914 ceters) SSL Stol QLEE Localium: 850 yards (914 ceters) SSE Sumt 25 July 4966, Bibini Aloli

Pask Unit and function the andmactum Approx Gesteri in Schmitcine Division. 132 of 70 1.2.4 (Subtarian Unit) as a target ves sel during CROSSHOADS. <u>Aponyon</u> carried special text torreactes for studies of studie black effects on ches.

- SPOR ABOUT (1 July, 0960)
- Anchored in assigned beach in taket array (1.000 yards (914 meters) SSE of surface zeroz in Sikins Lagoon. Crew 1 July evecuated to pottinees 20 rel (31 km) from shot site

## 7 July 1500

- Seboarding ceans A and B left Bottinger en route to tras Rayon (RH 12). 1532 Picked up isolategical monifor from
- Meyers. 1550
- Apecan bearded
- 1554 Topside reported tadiologically safe.
- 1610 Commented teensity of boas through after weighter seen hacks, megan certing for hydrogen gas and other explosive six tures. Nydrogen gas was the only gas ťounó. 1752
- Below derk spaces testing completes. motest power and lighting restored. Engaged in maneuvering watch. 1845-1850
- 0 July
  - 0746 Boas scho to Boytineau to pick up Team Chatile. 0851
  - Inspection of bost's safety file. inspection of indifferences: fairs sofery 0920
  - inspection party left 09 IC 'C' Party returned to beat from Bottl
  - <u>00188</u> 1045 Pressure gauge team aboard to Inspect gauges. Instrument party Lett.

1105 1117	Pairy came aboatd to inoptit radioactivi. http:
3110 1500	Provide gauge pasty left Satly value aboard to inspect food and
1520	redical supplies. Electronics party came aboatd and medical
1545 1650-1655	persy loft. Electronics party left the boot. Party came aboard to read toil gauges.
4 3014	
0 <b>605 0913</b> 1000-1023 10:0-1105	Party came shoard to check instruments. Party came abcard to check instruments. Steptionics party abound to check instru- ments.
0.301A 0.000-0039	Facty came aboard top electronics inspec-
0957 1035	Facty case aboard to review orientees.
8 July	
0935-LQA5	Cos Alexon instrumentation Perty aboard to theck instruments.
1200 1609	Party abuard to protagraph blast gauges.
9 July 8810 8945	Butway us singly statementation Party about to install topling velocity
1115-1263	gauges. <u>USS Kesvech infiling</u> LAV 303 instrumento thon group lane aboatd to resova ofec- tronic instruments tich (a:ward bridde
(35)	deck. Boarch poptsprie to target extraction ( <u>86</u> <u>Parche</u> 195-384), alongstde D\$S_fatton
	(#S-11) 10 Secth 231
2420	Target subtarine <u>USS Stipjack</u> (SS-1641) Lette alongosile to port.
10 JULY	reme alongos≮e (o pert.
	Target submarine <u>USS Salplack</u> (55-1641) Leme alongotide to port. Party aboard to check corpedses. Skiplack got underway.
10 July 0945-1010 1110 124)	reme alongoside to port. Party aboard to check torpedses. Ekipjock yot whäckway. Anchored in Decih 201, Biktoni
10 July 0945-1010 1110	reme alongoside to port. Party aboard to check corpedses. Skipjack yot umdesway.
10 July 1945-1010 1110 1240 1302-1435 13 July	reme alongoside to port. Party aboard to check corpedses. Skipjack got underway. Anthoned in Durih 201. Bikini Working party came aboatd to check Skre- vontrol gear.
10 July 1945-1010 1110 1240 1302-1435	<pre>Very abongstide to purt. Party aboard to check corpedses. Ekipjack got underway. Anchored in burih 201. Uiktril Mocking party came aboatd to check Stre- ventrol gear. Technician aboard. Party aboard to check torpedo data com-</pre>
10 July 1945-1019 1310 124) 1302-1435 22 July 0820-1200	<pre>vetw abongst/de to port. Party aboard to check corpedses. Skipjack got ofdesway. Anchored in burih 201. Uiktri Mosking party came aboatd to check Sire vontrol get: Technician aboard.</pre>
10 July 1945-1019 1110 124) 1302-1435 1405-1435 1405-1435 1405-1540 12 July	<ul> <li>Leme alongoside to pert.</li> <li>Party aboard to check corpedant.</li> <li>Skipjack got underway.</li> <li>Anchored in berin 201. Biktmi Monking party name aboatd to check Sire vontrol geat.</li> <li>Technician aboard.</li> <li>Party aboard to check torpedo data con- pute:</li> <li>Party aboard to twoove instruments</li> </ul>
10 July 1945-1019 1110 1241 1302-1435 24 July 0810-1206 1345-1835 1465 1540 12 July 0908	<ul> <li>Network above to pert.</li> <li>Party aboved to check corpedses. Skipjack got underway. Anchored in berin 201. Siktni Morking party name aboved to check Skre- ventrol grai.</li> <li>Technician aboved.</li> <li>Party aboved to check toppedo data com- pute: Party aboved to check toppedo data com- pute:</li> </ul>
10 July 1945-1019 1110 124) 1302-1435 1405-1435 1405-1435 1405-1540 12 July	<ul> <li>Leme alongoside to pert.</li> <li>Party aboard to check corpedses. Skipjack got underway. Anchored in berin 201. Biktni Morking party came aboatd to check Skre- ventrol gen.</li> <li>Technician aboard. Party aboard to check torpedo data com- pute: Party aboard to remove instruments</li> <li>Rewred starboard while to postclike of Salion. Transferred corpedows from Fulion to</li> </ul>
10 July 1945-1019 1110 1241 1302-1435 24 July 0810-1206 1345-1835 1465 1540 12 July 0908	<ul> <li>Network above to pert.</li> <li>Party aboved to check corpedses. Skipjack got underway. Anchored in berin 201. Siktni Morking party name aboved to check Skre- ventrol grai.</li> <li>Technician aboved.</li> <li>Party aboved to check toppedo data com- pute: Party aboved to check toppedo data com- pute:</li> </ul>
10 July 1945-1019 1110 1241 1302-1435 24 July 0810-1206 1345-1835 1465 1540 12 July 0908 0908 0908 1502 13 July	<ul> <li>Name alongstide to pert.</li> <li>Party aboard to check corpedses. Skipjock got underway. Anchored in berth 201. Blitchi Working party name aboatd to check Skre- ventrol geat.</li> <li>Technician aboard. Party aboard to check torpedo data com- pute: Party aboard to twoove instruments</li> <li>Rewred startward while to perturbe of Suljon. Transferred corpedows from Fulion to Ageges. Anchored in 29 Calborn (5) peters) of wates in target erray.</li> </ul>
10 July 1945-1019 1110 124) 1302-1435 1405-1205 1405-1245 1405-1540 12 July 0908 0908 0908 0908 1502 13 July 0940-0945	<ul> <li>Letter &amp; Jongstide to pert.</li> <li>Party aboard to check corpedses. Ekipjack got underway. Anchored in berin 201. Biktmi Morking party rame aboatd to check Stre- ventrol grai.</li> <li>Technician aboard. Party aboard to check torpedo data com- puter</li> <li>Party aboard to twoove instruments</li> <li>Reared startmant while to pertoide of guigon.</li> <li>Transferred to repedows from Fulion to Agage. Anchored in 29 Calbors (5) meters) of wates in target erray.</li> <li>Damage inspection group calls aboard from USS Whatton (AP J).</li> </ul>
10 July 1945-1019 1110 1241 1302-1435 24 July 0810-1206 1345-1835 1465 1540 12 July 0908 0908 0908 1502 13 July	<ul> <li>Name alongstide to pert.</li> <li>Party aboard to check corpedses. Skipjock got underway. Anchored in berth 201. Blitchi Working party name aboatd to check Skre- vontrol geat.</li> <li>Technician aboard. Party aboard to check torpedo data com- pute: Party aboard to twowe instruments</li> <li>Rewred starboard while to perturbe of Rulion. Transferred compedevs from Fulion to Agogo. Anchored in 29 failwas (5) meters) of wates in target erray.</li> <li>Damage inspection group take aboast from</li> </ul>
10 July 1945-1010 1110 124) 1302-1435 24 July 0820-1206 1345-1245 1405-1540 12 July 0908 0908 0908 0908 1502 13 July 0940-0945 1502	<ul> <li>Letter &amp; Jongstide To pert.</li> <li>Party aboard to check corpedses. Skipjock got URDerway. Anchored in Derih 201. Biktni Hocking party name aboatd to check Sire vontrol gear.</li> <li>Technician aboard. Datry aboard to check torpedo data com- pute: Party aboard to twoove instruments</li> <li>Rewred startmant while to postable of Suijon. Transferred corpedows face Fulion to Auggro. Anchored in 29 failwas (5) meters) of wates in cargos erray.</li> <li>Dabige inspection group came aboard from URS Whatton (AP 1). Sonat inspection party came aboard from URS Whatton (AP 1).</li> </ul>

2030-2022 Parry came abound to inspect salwage €[K15bge

## USS\_Ayogon (SS-308)

## USS Appalachian (AGC-1)

(* July 0811 0932	Party about to install deflection gauges	8 Nagara	Agogon's clear transfervé to remanded tar- ger ship u <u>SS</u> Fi <u>lletre</u> (APA 80)
2010/2120	ta (napeda sune. Party aboatd to work on blast gasges.	10 Magust	Siving operations stated.
16 July		12 of August	Siving operations costoned, seconded
1000 1945	Party care aboutd to pick up blass poss.	•	s of pode lot during .
1440-2415	Party aboved to pick up point parce.	12 Magget	Must defage reported to wait bolliest
(1 վորեց			"atiky CA SB, 6K" and CD, tank " had
0840 -: 150	Rigged special weight-subjection bridles tas test SURNM.		large leaks even top on ven: closets Diver lapoited that tark lap around fin
2845 1540	Party eboard to install the company.		anter pullant rank peut riser was cop-
16:3 Lexe Id July	Paris accord to post photographic films.		threads after accessible rooms (1) of wares. nation found no be being on the solution of was beingwed that now mechanism had
C402 1100	Working party came aboard to place Word		Called. Manwayering roop mentalised water
	opli N20 repaido for sear bhabh.		shell was being being out. The after pas-
1500+1425	Party namé aboard to work on tanànéo nyam Gauges.		tery fairs was found loose on the sect with bubbles encapted. It was made sight by turning band wheel. Meandaile civity
20 July			operations continued.
0645	through first even still party off in		
04:7	preparation for test MAKER. Submitted at attract.	<ol> <li>Noglass</li> </ol>	Continued work on regativing the alone instands each hatch. Blue water from cost
0859	Set (seed		ter courses despite unique etc leas in vi-
1035 1052	Party case aboard to rake patton pictures of (opside).		clusty of forward rorpedo loading batch. Sometic english true and Alter mottery
1050 1115	Party bearfed to check instruments		- Kould be partially brown despise large - Loak from mach within stree and of rent-
21 July UESS	The survey report to an and stand as a second		ing : Swit fallware;.
00.7	USS Cyppy (ARSE .: moused alongside that : heard: normoniced work at suspecting spy cia; weights for test BASES.	со жарыс	Companied sativage towardings. Removed 54dly daraged after torpedo total batch.
2060	Gyphy tottalled out of submetged engages		states at a terms an estimate destinant
1005	eff and observed starboard slide Cyysy modered to starboard shife to install set of weights.	the Replace	Vantinued subsequences/form Continued Intering blow connections to the fuel half- last cashs and waking the disce coopedu
:225	typay completed togtaliation of weights and cleared starboard side		issue (lyth). Approximately de persons of the bestydney required to left boot was
1945 LCDS	Parry came abunded to check instituters a Fion work.		evaluable within the boat's stouttine.
1945 1700	Party from Haves, same absard to install test number to:	() August	Concentrated salvage operations.
		19 Jung Ma	Attented to Inda,   blow encapetter, be-
27 Duly 2500	Brish (Logicy Submation in artuidante		the alter fael ballous and file, canks, proceeding situation.
	with sporfal sidewiged condition attach		President of Presidents
964Ç	Playing of hour second relief the est conta- detraction to be constant second final	20 #1.just	Cont (mask systempt special function
	opening, the elser engine soon naria:	7. A.M.51	Continued salvage operations. All duel
5930	showed by for Kiloneugerse. Commenced sigging bodes to Kalwage Lines		- Seriest and fael tanks off of the consing news fifted with blow environables. Stars
	From USS_Conject (And St. Evaluation) crame to [Information]		Log from all did tarks being restor and code at flight
0950	Boat signed ins give TA and TP parties evanuated to hospiteony. Course componed	20 August	Continued walkage operations.
	Salagerging the submation for test MANIN	24 9 (94)	Staff anywertert confided and made
Shot Bakit :	25 (u'y. 0635)	24 A MAD	available to CRS 1.2 to: Chapter.
25 Pally	Quinny-ged at anchur to applying publics		
	to target array (850 yards (201 meters) 586 of sintage arro) in Bixing Lagoon.		1055_42PA:_AC+ <u>1A</u> 4_;AGE=11
	Come evectated to Bott <u>im</u> iae 20 mBi 13/	Contem States - U	
	ka: tion BAKER detenation, state, spogon	Birinh Alci:	Arrival, 29 June 1946

sank as a cosult of BAVER.

: August

Ledger creatings mean Agrigon at 165 (seet (50.1 meters: deposit) 2024 foursuld test (0.22 moteria) addres (without 2024 foursuld)

Birinh Alci: Akinval. 59 June 1946 Shainh Alpi' Departure - 29 Juny 1946 Shai 46.5 Jozathon, 18 non (33 rm) Mab Shai 46.5 Bakig galathon - 5.5 ron (39 rm) Mab Deconseringtion Islation, Sum Francisce Operations: Disaration / Decober 1946 Dina (Transmission) Cobber 1946

- Task, Units and Pescilion. <u>Appelle</u> hi<u>gh</u>, on amphibicus force flagship. Served In TU 1.0.2 (Press Unit), Dis functions wie Comaunications support, messing, berching, and transpolicitation for investopped and cadeo replaters.
- Shot ABLE +1 Jely, 0900;
- 30 JN:19 1004 Underway for an area outside of the la 0500.
- I July Í409. Army patiol boat V 696 came alongoide to pick up press films. Aschound in boats 201. Biking Atols. 1609
- ∎ July LIG7 Underway for Weatabeln Atoll to disentarit press correspondents.
- 5 Suly in 10-Accorded as swataleto Aroll.
- 6 July ion Underway for Pearl Awaber.
- Arcticity Provide Anthrop 12 .0019
- 14 July 1055 twit mouth Hatbook after picking up press personnes
- 21 July Arctives as Respatete Acult and Smoods ately left for likest arour.
- 27 3514 Arrived at Bikint Aroll and anthored in 0641 berth 92. Blkant Novil.
- Shet BAKER (25 Jung, 0535)
- 24 July 0555 Underway for an area outside the lagoon.
- 25 JULY 1/46 Ancho:ed in Decch 303.
- 26 Puly a(ài Underway for Awajalein Aroll.
- 23 July -0946 Arctived Meajoheth Aroll. \$752 Underway for Bis (05 Atol)
- 28 July 0902 erroyed Street Atolic.
- 29 July Departed Jor Amegalein Arall en roure to Hearl harbor.

#### USS\_APPLING (APA-58)

Crew 511e 776 Bikini Alabi Arrival. 3 June 1946 States Alogi Departure | D Auguss 1946 Shot BAFER Localbon: Did put (19 km) SE (area Chalmens) Deconceminetion foration. San Francesco Operational Deprature: By 77 Movember 1946 Final Clearance: 19 Oscentier 1945

lask Unit and formitus. Appling was an actack transport that served in Transportation Division 94 bn tu 1.2.8 (Netchart Type Unit). Its incline was to noise personnel true target vessily for their ANIF and MAKER II also was a base for LCPLs and radistingited reconnalissance personnel. SADI ABLE || JUDy, 0900| 5359 test the lagran with DAS beating 180% 451 for steading area, after taking on froms fere from target knip (52) Geneva (ASX-86). and other personal. 3 July 1196-1121 inveced seven indialogical parcol boats. Into the values and (eff the )epocs. 1758 Anothered in perch 200, SHMShi Atoli. Lowneed all radiological boats for parses 0515 par poses -1970 Segan disembarking Teams & and P Itom coneva . Control Trat C discretared 1235

Shot BACER (25 Kily, 58751

10 June

2 Jugtre

- 26 July 1629 Underway buy thes old of the stabl which vacious transfers.
- 25 July iði ! Mineuvered wess barbo: entrance and low ered tadiological beats. 3000 Cett Lacoppe.
  - Anchored in perch 7. Baking Acord. L 530
- 28 Jely Shifted to unidentified berth.
- 30 July Shifted to beach 20)
- 5 Abgust Shifted to bergh 56.
- 2 August After transfecting four LCPLs (apparently 2741 used during the operations to USS Newer (AN 121, underway for Knewetus Atols to pisk up catigo.
- 3 August 0854 arclued at Innetak stoll
- 7 Require ) 50% Indexesy for hikips Acold
- 9 August **ORNE** Aschored as Mikhon Apoll 26 pick up per sonnel for teamsmortation. 1715 Underway for Pearl Herbor.

#### ARD - 29

Cles Size - 106 Right Aleil Averyal - 26 May 1946. Siking Atoli Geparture: 75 August 1946 Shat ABLE Incation 94 mmi (174 km) SSA Shul SARFE [15:2]ton Rongelap Aloih Servicembaction Location - Pear's Parbon Operacional Clearances 36 February 1943 1164) Clearance - 38 Rebruds y 1941

## ARD-29

	ARD ()\$, Seydlock, and Serv ()ng, sop (segget v	Function a non-self properties numlikaty theather was a support vessel in fill.A.1 (Repair tow Unit) (is functions included salvag- plying provisions, repairing, and careying escals, it also served as "Seet fast of d provided recreation, egal and welface es.	7 July Jaca 3 July 7500	A Desiring them came about for an unspecified partod of time (Reference 6, pp. VII-1-30 A and VII-1-32-A) Beached (n who)ice wates to prevent similary (Recervice 5, p. 5-8-18).
\$50%	6918 (C	2615. 28003	SHUL BALER C	25 July, 1835)
20 34	910 616	Currying 22 LINPS, 27 582, and a proton . Undermay in the by USS Stoke (472-75)	Sank cu d fe	sale af stor SAMER.
				U <u>SS ARKAM</u> SAS (68-33)
2 Jack	0431 Å	Moored to bloy in Secto 200 A. Bikini - Atoli		kél Arrikal – 28 May 1945 n Mar Shat ABLE: IVSS Rockoridge (APA-2201)
		5 July, 8834;	Cline Localho Shor Asil Ne	n far Shot BAK!P: <u>Sork5-</u> 7dge Kalfon: 1/2 yards (10) meters) 555
20 32	.Jy 1842	Consyling 20 LLVTM, 29-582, and a portroom, underway in the by Si <u>nks</u> for Remoning	2006-22-11.9	olåfsor: 6/3 gart: 1980 meters: 4 1946, Birln' Atpl]
2e 5.	1.0	A();.	Task Lets an The bas	a lunktion. tieship Arkanises was a target yenne: dury.
	:511	Atchesed as Roogelap Atoli.	kną CRO stasti	MSWOADS. Iss crew was evoluted for oach is served in Hattleship Division i in to
	1919	Underway for Sykphi Aroll	eq_ippe int qau	Battleship and Cruisva Ondel, Nigghied was diwirb ball crusher and [ren-piscon renord- ges [at the Cadhance Groups it also cattled
31.00	194) 194)	Archored in Grath 63. Bigint Assill for loading.	vest ak Smit AR F (A	
3 844	- 54	Chadned at Beach 2 10A	10 June	Grew evacuated to Rackbridge. Three Con-
7 ALC		Shifted to bench d).	1515	gressner stalled during evacuation. Ship timed. Caprain Geparted.
25 <b>a</b> -		annexed planes and the same as from	1.6.7	•
1	es)a	Separted Biezot Atoli found by 54000.	2 .A:19 1545 .525	(string) bootding and service loan (Team
20.94	. <b>4</b> 451	Protved Kwajajeja.		At sheard, Ship was reparted scill sadia- notive.
16 54	pre-miner r	Departed Keajalein rowed by LSS Chowarks' (ATH 100):	1646	Chive fares put out chaterence 5, p. 6 p. 71.
5 201	aber	Arrived Pear, Earbor,	J JAI(Y	
		A# CC - ' 3	140	The copiair. New reducte conitors, and Seam A returning for a technological in operation of repside, gasoline storage sea, seemstore lockets, and turners 3
štktu Sta:	<b>48</b> , / 100	Arilwa": Betore 10 June 1945 a'fon, 527 yards (196 meters) W (aston 1,250 yards (11 mm, MME	1936	shd 4 Emspection completed and dangerous areas marked. Aztoniston lockers and surgers 3 and 4 Found (adjusted)) with logger
		1946, 3161r1 Ato"	2210	fion of second deck began. Loong foll solp.
	ARCC: No.	Farition a concete autiliary floating devects.	وزرز ه	
	10 15¢	isgot vesse. Guting CPO38R0005. Is served Riserlinneoun Group in TO 1.2.5 (Landing It) and sada as a remuli of Economic offer SE	075) 0965	Captain and Teams A and B thatded to be give opening comparisments below decks. A.I forcers inspected and found cadibility teatly safe.
Sne:	AB. ( 11	Ju"y, 8900)	1647	All partles left ship for Reckbridge.
		•	5 July	
<b>54</b> (10)	d their	an Rimani senii amuC-13 anchored and re for what seni:	0810 1705	ingende, ded Tonas A and B refearded. All parties departed except for a six man security detail
1 201	7 2900	Reported to still be redimentione (Refer ande h. p. 6-3 (1).	6 Unity DRVC	Captain and Teach R. S. and C. repearCed.

## USS Arkansas (BB-33)

## 6 Joly

- 1955 All parking departed extent for a wix-man 17 August Security detail.
- 9 July
  - (812) Captain ANC Tests A. B. and C. Leboerded. 1633 All partiter departed except for a six man recutivy Cetail.
- 8 July DROC Capitaln and Teams A. R. and C. reboarded. 1645 All parties departed encope for a six each security detail.
- 9 Fully Amboarding teams 4. B. and C boarded and remained aboard
- 10 July Entire proviewboarded.

Snet Bakes (25 July, ORDS)

- 24 July
  - 0900 Evacuation plan pot sato effect. 1550 The phip was empty and closed.

<u>Mikediges</u> sonk as a result of the denomination. On 6 August, the crew was considered to various write. A 21 August diver's explore slates there was denoge to plating and on the starboard slide of the ship share wate many clost.

#### USS ARTERIS LARA VII

(rew Size 160 Statem Algori Arched) 27 May 1946 Statem Algori Arched) 27 May 1946 Shot ABLE Localico: 213 mm (24 km) 54 (Area Federal) Shot SARER Socialize: 210 mm (404 km) 55 (Area Federal) Secontamination Localion: San Prancisca, California Operational (Rearphone 20 November 1946 4 mai Cleargnee 27 Genember 1946

Bask Unit and Funchion <u>Accepts</u> was an atrack cargo SREP that served in Transportation Diutsion V4 LP TV (12-5) (Metchant Type Unit). It served we a base for rediciogical LCPLs and Crows and Also as an amountflows state ship.

Shal ABLE [] Juny, 09001

- 30 July: Attended will the Jegoth for an eres out: side of the Legoon.
- F July [209] Nowered why radiategical servey basis late the keyban and returned to position putside the keyban 2752 Anthone in territ 206, White Atol).
- Show BARLER (75 July, 0835)

24 July

- 1423 Underway for an area outside the Lagoon
- 25 July J018-1020 Lowered six radiclogical survey beats into the channet and lets. ISD: Anthoned in Serie DRS. Bitting Atabl.
- 9 August Dumped all its accounting outside of the harbon and anythred in Gerth 34. Marginia Aboli

- ATA-124
- gus: Five numbers of tadiological succion boarded to impact. No acess and spaces except one wass pronounced "perfectly safe from a radiological point of view. Array Engineer equipment ison target ship USS 1.57-545 in Hold i and two small cristes there were found to be penging 0.112 K/24 hours and were recommended to be secured and parked as damperous.

18 August

2720 Underway for Dearl Harbor.

A1A-124

Crew State: 44 216(n) Ale() Archea) - Before 75 June 1986 Bising Aleil Occasione: 25 August 1946 Shot ABIE Locallos: Abjuorizately 120 not 4222 kmg SSI Shot AKEFA Equalion: 11 not 132 kmg SSE Decontamination Location: Puget Sound 1041 Clearance IR Cecemper 1946 Task Unit and Function ATA-124 was an auxiliary ocean tog used as a suppost ship in 70 5.8.1 (Repair and Service Unit). The functions were towing, separating, and salway, ing damaged targer vessels. Shint A8\E (5 July, 0900) 30 June Anchosyd in besch (9)-X. Bawjal 1,200 \$4,30 Underway from Baking Atoli to Avajaieto. MacH1. i July i 102. Moured to YW 92 in Desth K-20, Keajalein, 155 cel (287 Amil coutheast of #Ukini. ې اداد 2 0142 Underway from Kesjalein Atoli to Bikini atob) with W 92 in the 9 July 1142 Anchored in berch 193-A. Rikini Acoli Underway to moor alongside throat vessel 35241 (CI-124 to deliver mater. 1445-2637 Moored to LCC-329. 1617 Underway to go stongstde USA\_NJ\_Coel OM-21. Underway to go to berth 191 A. D15 Anchored in berth LQJ K. 1812 July 0/90 Underway to go alongside target subwaring USS\_Outche ISS-384> to berch 231. Roared to target subsarias USS Apogua 0832-1726 1246-1145 . sesseries invited on 1801 F2: 4245 underway in Derth 191-h. Anthored off how of USS Pulton (AS 3); in victurity of be th 231 1825 5 IL 2019 Engaged in courses rasks. 12 July 9729 Underseage Modered to target ship USS, pres Yath (BB 34) to tendelive annemation. 0150 0610 6830 underway from the slorg to conget ship 1775 Pensarola (CA+24)

Nooted to Pensacola to Load boxes aboard.

6865

## AJA-124

12 July

0335

T F F G

1001

1500

0145-0155

1756

1905

1334

1355

1440-1510

1530

1545

3555

16.5 (715)

17:5

1739

2630

0945

1045 1100

1104

: 320

1557

2709

.715

1510

1517

16.61

1905

1920 2255

2130

15 July

16 2019

() Jely ()25

undermay to no alongside target submarine.

Underway (com State to almoun)tion Curping Area. .0 cml (19.5 km) off Erea Island.

Anchored Detween Destine 147 and 169 after.

Enderway from eCT 13/7 taying respired

Successfully moored (TT-1268 to (TS Sam

Moored is farget vessel (SR 60 to trans-

Wiletway for VP months to sick up three

camels fus delivery to target whip \$35

underway throughout target area to check.

Weigewey wath 167-1132 in the in most Ltt to 155 Curston Mail: 1280 Mil

Moored to LCT 1268 which was rooted to

Underway wath that LasB an low to last

Contervery to an torage, having monred LET-

Laying to off <u>SS</u> (n]; ton (A2A-98), underway with out LA15 to  $\underline{\text{Mar}}$  <u>Marcon</u>.

Anchored in vicinity of beat's 198 A.

Moored to Skate to sped amountstan

completing dumping mission.

Anchored in Secto 200-4(No.)

Underway with LCT (1)77 In Low

Endermany with LCC (268 in Low.

Underwey from San Harcore.

Mattics (180-25) on Larger array.

Underway from elemyside LSM 65. Meaned to USS Severn (AG-66). Anongred is month 1914. Bakini.

"Ange for location of campion

Orderway to pick up LCT-1012

preservey, having mosted with.

1415 to Sat Forces Anthored in berth 191-M.

USS Skate (12: 105).

Housed to DAT 1977. Took (CT-137/ Sn tee.

moosing Mission.

ter tresferates.

Maximuda (BR 15).

Roomed to Nevada

Moored to LCT 1112.

San Myrcos.

BOOR 3 MAG

Moored to LGT (268.

Underway

Undernew. Repriet to 1.07 1268. underway with CCT-1132 to the to Songelap atoll. Anchored in beach 4. Pongelap Atoli atter mooring LCTs. Underway to Pikin: Atall. Anonoted in Decth (3) A. Biking.

ATA-124

- 18 Cuty 22.72 inderway, alger raking on wares from Several to target submitted UNS Skapiank 155 3845. 0636-0934 Moured to Secolary
  - 0945-.059 Moored to carget subtaritie USS Dectada 198 3311.
  - 1:01-1200 1900-1**42**8 Rooted to Skele
    - Madeed to VF 123. .423 Orderway to Rongelap with VF 733 in toel.
- 19 Daily

0910

0970

1765

6152

Ç93.

1856

A Sug

- ()13 Noticed to YF 233.
  - Underway to Riksoft. 1452
- 20 Daily 3543 Anothered in beach (91 A. Pistol: refaeled throughout day.
- 22 July 2876 The resp. 6943 0955 Rooted to sareet ship MRS Arkansas (98 11). Orderway with cample in tow-3955
  - 1013 LC15 1024-1010
  - Moored to Meyada Moored to Target ship Sageto. 2030
  - Differway from Magets, scored to ARD-29. (1|2)Lots campio with ARH 79.
  - .125 Underway to now catgot ship Print Eugen. 1510-1555 Nooted to Prant Rugen.
  - 1630 Automoted in Secto (3) A. Sikina.
- 23 July Reacting activities.
- SNOT BARER (75 JULY, 0805)
- 24 July 1450 Underway in column forwarity, for Rongelap, ALCI).
- 25 July 1520 Anchored as Rengelar Aroll, Desch 9.
- 21 July 0.25 Underway for Stirbs) Apoll in company with .17 176
- 28 July 0810 Anchored at berth 4, Minist Atoli 1010 Underway to Rangelap Atoll.
  - Moored to AtA-IR! in Systh IC, kowce.ap. 2341
- R0 ⊋oly 2533 Underway for diskant Atoll.
- Are lested in beeth 231 A. Stkind. .934
- worked in vicinity of Acart Island 31 a.y throughout day. Including transporting a pontion causeway. 1257 Anchored in beeth 191 R. Bikini.

7 Acquist

1521-1612 Magazed to YP 760.

3903 Juderway from Secth. Moored to YF-731 to receive sheel plate 9925 fur Nevada :300 Underway From 10, 700 1450-1530 Heared to San Magnes to assist in docking ιст. Undermany from San Marcos. Anchogod to best ad, preparing to take 1210 :555 LCBs from beach. 3610 Underway from heath 1.105 Monted to Wevage to transfer angle from lanan . 1712 Under news 1130-1115 Moarea to LCT-1237. 1756 Devieteday from atomyside (c): 1132 18:0 Monared to ATL (81) 1841 Bedrewsy wa beckt 191-81 : 200 Anchosed in beech 191 A

16 July 0733

Underway from Devit, (91 Å, Hoored to  $1.07 \cdot 1302$  to take vessel in now. 0835

# ATA-124 2 August

1737	Underway true YF 990.	1436	Underway to centure pointson float to biog
1854	Anchored west of Romy letand.	141.0	in vicinity of Scabee landing
) hospest	Available AVG 29 to assigned berth.	1610 1636	Subderleavy from pointext lines. Anchored in victority of betch 60. Sikini.
5122	Anchored West of Eneu Island.	i e sa	Antional Proteining at Detail of Stellar
		18 August	Spens day in vicinity of ATA 187, YM-92,
4 August	Assisted in monoing and teacing study	•	and Wildian.
	boare co San Marcos.	2240	Anchored in vicinity of beeth 230.
1450	Anchored in area west of these island. Biking.	9 Lugard	Speni activity of \$14-92.
	B1K101.	In Today	Several and Dister.
6 August	Towed 185 Reletty (JKA 99) to Seaber	1011	Anchored in victality of betth 60-
	Jending and travel pontable inflige to		
~~~	Bokaetoktok island	20 August	Spent day to vicinity of ATM tSY. of 711. and 39 92
2055	Anchored 1.500 yards (J.4 km) cortheast of Scheetenick Palands	1100	Anchored in vicinity at beech 60.
1 August		21 August	
1227	Anchored in Seria 191-A. BUGINE	424	Underway to go storyside Dung
4	The second	1448	Moored to <u>Suna</u> to deliver trastwater.
8 August	Towed 30-112: transported camel from 058 Botthrwad (MPR-235) to YE moorbry.	1746	Several vita Turne to go Atoogsido. Several
1615	Apphored in Seria 1914	1852	Hearted to Several to take an fresheater.
		1643	Anthored in period 69, 8[kin].
9 August			
1655 17t0	Utiletany. Mandatan off terms with the test double and	72 August D9i0	Underway to ARD-20.
1114	Stending off terget engy LGS Costiend (APA-15) to assist in clearing Costiend	) 6 2 4	Underway to assist in undocking target
	from alongside LCS biste (AD 14).		ship USS Hughes (02-410) from Add-29.
1720	Roured alongside Cortland.	1140	Moored to Mughes for towing.
10.28	White way with Cortiand to approx Continend	1159	Underway with <u>Hughes</u> in the to buey be
1827	in assigned be(18. Underway from alongside Corriand na vi	1417	tween bestim 160 and 141. Uniterway trae alongside Rugies.
1961	Canta of Let Incatog.	1457-1540	Naared to USS Encree (AD b9) for rewing.
1855	Archores of LST ionaing, Bikini, to	1951	Anchored in victority of beren 59.
	assist in salviging beached target ship		
	0%) (v= (25)	23 Junyusi 0617	deda
10 August		0011	Underway with YS 733 in the to Avejalein.
1015	Underway to Perkactowtok Excend with pon-	24 August	
	Loon Cause by but LC & 15 to-	1145	Nouses to YTB 553 at mojeleto, having
1256	Accived as anchorage off Bonemiowenk		moared VE-193 to <u>USS Quartz</u> (1% 150).
105	∎sienć Undezway to brat pos≩ area oži Biktrij	1403	Paderesy from Revjoleto 40 ulkani.
1.000	Isjand with COI in the	25 August	
1512	Anchored in Secth 169, Stkint, in boat	07.10	Roores to PGH 24, Derth 51, Elkini
	pool area.	0757	Underway with DGM-24 in yow.
1.3 August		0900	Underway for Kwajalein with PGM-24 in
12 Avgust 0946	Under many .		Low.
1044	hoosed to sarges subservice (68 june	26 August	
	(cs-203) to deliver treshnater.	0655	Moored to ATA-187 at RealAte-10 Acots
\$150	Underway to Wildgal to take on fresh-		atter moaring POH 24.
1320	wales. Anchoset in serih ibi, kikani, after	27 #c=tus:	hoosed vactous programmet ships at
	taning on water.	21 11-9451	Fwojalejn.
	· · · · •		
13 August		28 August	
0929 1025 1045	Delivered water to 95% 26. Bachaged in wisining of Serth (69.	1470-1500	
(24)	navadithe ta estilució es encou ide:		spect for radioactivity: declared clear of radioactivity.
14 August	Towed SF-T23 to beach 190 and uper: the		
-	cout of the day moved in 155 Pollog	JA Avgust-1 5	
4515	lans-at. Anchored in berch 147, Bikint.		Specated at Kwajalein: not involved with
1010	nne-aere in belli bet, beeling.		targer ships.
15 August	Shifted to victally of beach 59.	8 September	
	•	0157-0814	Monored next to range, submation Skiplock,
Sa August	Delivered water to 201 24.	O Base	المعامية والمحالية المحالية والمحالية المحالية والمحالية
1942	Anchosed in vicinity of besch 63.	o Septe≞er	Leiderway to Graci Hatbor with YF 385 in . Cont.
LT August			
0557	Anthoted south of Assamt toland.	26 September	Moored at Able Docks, fearl Harmon

## ATA-180

	ATA IBQ	1953	Poil addrer toolog on <u>Mevada</u> 's mooiling booy: recained anchoror at beach 143.
Crew Steel 4			
	Arnhout, Before JS June 1946 Ocuanture & Sculember 1946	la suly DADS	tenter about the store from the class
	ation: 20 mm (37 km; SL (area Mercury)	1007.2	Apphase classed by diver from USS Clagation (NSS 31).
SNOT BREFR BS	station, >14 mm² (26 km) SE Ion _orafior: Puget Sourd	2638	moliced in Sect 52.
	Tearances 24 Lebruary 1947, Suget Saund	15 Culy	
		0830-1216	Moored Larger vessels CC/332 and 1/1-323
Task Unit and			in rasger biray.
	wh workling ower tug, who a support	1240	Nocho:ed in Secth 52.
	TV 1.2.1 (Salvage Shit). Its functions		
	fight fises and repair and selvage demoged	16 July 2700 0733	would can be use the one boy share a secondary
(arget a	( <b>199</b> -14)		Towns 130 60 to A <u>lternativ</u> e: then proceeded - to anchorage.
Shot ABLE CT	(w)y, (900)	(267-11/0	Tower (124-60 to apering busy.
		1340-1411	Alongside sarges ship
1 July			61; to pack up APA book.
6530	Underwhy for asso buiside the Narbur	, 5GU	Anthones in Secth 52
2750	Anchored in North Queen, Bikins Acoll.		
		17 JODY 2000 J745	Noved E <u>nclopendence</u> to stea with 22 fe
2 July 07/0	Took extrainated party should from Las	1102 1145	Noves therefore to seek with the be- thoms (42 meters) of water.
	Heven (AL 32) to sarget s).1p USS Endepen	1.81	Anchored in Reish 52.
	dence (CV., 22).	141	
Q¥25 (112	Trees ( ) odar repórtantes.	to astr	
1545 2735	Alded VS3 Chickewaw (ATE 53) rowing inde	0510-0900	Towed and most of 1.58-60.
	pendeore.	0915	Anchored in Sersh 52.
1658	Auchared in beich Mugel, Mikers etell.	22	
) Jule		20 July 0315-5905	Tower and woored 154-50, then got under -
2945-1505	Sowed Larger vessel ANDO 13 to beaching	0-11-0407	MEN AND ROLLED LINE OF A REAL OF A REAL OF A
	dt PA .	1300	And last of the sea the 52
:512	Anchored in beath Queen.		
		Shot BAR!# ;/	25 3940, 48351
6 2019 0750-0125	Conducted Amalon contraition and exclusion	24 July	
0/16/1129	Conducted towing operation and assisted to accessory respect they <u>used me</u> waga	3103-8963	Demosred (SR-60 br. the ranget area after
	una Mo).		Lowing 1: 10 Alternatic Several Lines Dev
1372	Onderway to pick up instruments from		fore shat PAKER.
	Charkasan to take the the test for the	1100	Anchoiced in twitth 52
	1015100 (NY 14)	1066	Underway ist area outside of lagoon.
.620	Anchored in berth 52.	25 July	
ענטג ל			Auchored in special assigned berch 2.
1005-1253	Tower (asge) whip <u>Sonato</u> .	1045	Underway to target thip (ES Blader (194-
1910-0015	Nicogside LSM 60.		591. · · · · · · · · · · · · · · · · · · ·
1326	Anchored in beenth 52-	1305 1310	Scorflog by <u>Bladen</u> .
• 1		1731	Returned to Beith J
8 Jaay 2 Jaay	Turned USA 61 to USS Albertaria (AV 5)	28 July	
1570-1111	Towned LSH-60 to movering buoy.	1350	Enderway to askist ATA 192 in beaching
1 190	Anciested in beich \$2.		terget suzmering uss Dentrade (SS 335).
		1440 .7:3	
9 JULY 0800 2905	The last last of the sec	1605	Anchared south of berth 179.
C623	te victuity of August. Antiport in Decisi 52.	No July	
<b>VOLN</b>	ANALYZER AN ERECT AL.	6752	Underway to Kernaph Majiring.
11 July		0530	Stood all Kenneth Whiting white tediolog
0520-0720	Towerd (1941-60 to a terror and moothed bit:		Icel Instrument party went aboard-
	then gos underway.	0850	Underway to inspect vessels in carget er-
1102-2405	Towns ARDENIA for deep water, then got	ANA (	ray and pick up radiological instruments.
1615 1855	underway. Toward LSM-bD to berlin 54.	0900-0946 1020-0053	Alongside Heveda Alongside target ship USS Pensacola (CA
1922	Anchesed in perch 57, Bizini Atoli.	1070-3005	20),
		3.00	Radiological penarois reported that the
12 Jety			ATA-160 crew had reached maximum toter-
0.355-1615			ance of contoactivity (C.1 R/24 nours
1630	Anchored in besth \$2.		ascimut allowed).
() July		1125	Underway to <u>Represh Whiting</u> to transfer Instruments taken from target ships
	Towed ARDC (1 to the target array.	16,/1	Anchored in berth J.
	The second of the second se		

31 Jaiy 0702	Orderway to wieldstry of Kenseth Middling.	
0745	Standing of Kerneit Philing to receive	
2142	fadiotuginat party. Inen underway Inc.	
	targel ships.	
0604-0430	Shending by target slipp 233 Descurade	
	(RPA-85).	
0814	underway for recent while the lighten this.	
	20.	
0925	Recurned instruments from Carten.	
0845-0903 0920	etungside cauget ship <u>intrinule</u> (Aka-ob). Antived at K <u>enneth Mattion</u> and <u>Ken</u> ego	
0420	(AM-12) to pick up Geiger wordtar war had	
	seculous masseum amount of tedicactivity.	
0976	Dide twoy for Hgole.	
3945-0949	alongside Bryle.	
0049	Sucremay for carges ship JSS Dawson 1994-	
	79),	
100-3-1004 100-3-1004	Riengelde Gamson to pick ap instruments.	
1000	Rođervay for target ship U <u>SS Critende</u> s (ADA-11).	
4(01-+10)	Njungstide <u>Colificenden</u> ,	
1050-1056	Standing by Kennech Molting to pick up	
	Lines composes	
2056	Brillering to Hayes to pick up Dolger her.	
	ltor.	
1104-1115	Standing by <u>Baven</u> , then underway for . beruh.	
1223	Ancheron: in Dentis J. Bisini.	
2 August	Shifted to anchorage south of perch 379.	
-	·	
> huqust	• • • • • • • • • • • • • • • • • • • •	
\$830	Steened Acourd <u>Gaperuhade</u> tableq monthot	
3843-3940	eradings Washed down Geesconede.	
0952-1000	Alongside Larget Ship VSS Brisger IAMA	
1001-1045	65). Resumed weather proceedures	
	65).	
490/1+3045 6340	65). Resumed weatherer proceedures	
4001-3045 6 Jugan	65). Resumed weathdown proceedures Anchoued south of Beath 379.	
490/1+3045 6340	65). Resumpd weathdown procedures Anchored south of Becth 379. A working party of one officer and six	
4001-3045 6 Jugan	<ul> <li>65).</li> <li>Resumpd weathdown procedures</li> <li>Anchored south of betth 379.</li> <li>A working party of one officer and six entitated men from ranger ship 355 Stark</li> </ul>	
4001-3045 6 Jugan	65). Resumpd weathdown procedures Anchored south of Becth 379. A working party of one officer and six	
4001-3045 6 Jugan	<ul> <li>65).</li> <li>Respective weak-below: proceedures</li> <li>Anchored south of betch 379.</li> <li>A working party of one officer and six entiated men from ranger ship <u>USS Stark</u> (00-416) case aboatd to assist in the decent astroption.</li> <li>Anchored off Stark</li> </ul>	
490/1-3045 5340 6 Jung-ast 2010	<ul> <li>65).</li> <li>Research weathback procedures</li> <li>Anchored south of Berth X79.</li> <li>A working party of one offices and six entiated men from ranger ship <u>1055 Stark</u> (00-110) came aboard to assist in the decontamination.</li> <li>Anchored off <u>Stark</u> with decontamination</li> </ul>	
1001-3045 5340 6 Junjuni 1010 1235-3430	<ul> <li>65).</li> <li>Resumpd weabdown procedures Anchored south of Berth 379.</li> <li>A working party of one offices and six entiated men from ranger ship <u>355 Stark</u> (00+15) case aboard to ansisk in its decontamination.</li> <li>Anchored off <u>Stark</u> with decontamination compound.</li> </ul>	
1901-3045 5340 6 August 2010 1215-2430 3430 2500	<ul> <li>65).</li> <li>Resumpd weakdown procedures Anchored south of Berth 379.</li> <li>A working party of one officer and six entlated men from ranger ship <u>355 Stark</u> (00+1/6) case aboard to assisk in the decontamination.</li> <li>Anthored off <u>Stack</u> with decontamination cappend.</li> <li>Getget mobilizes from thedings of Sterk.</li> </ul>	:
1001-3045 5340 6 Junjuni 1010 1235-3430	<ul> <li>65).</li> <li>Resumpd weabdown procedures Anchored south of Berth 379.</li> <li>A working party of one offices and six entiated men from ranger ship <u>355 Stark</u> (00+15) case aboard to ansisk in its decontamination.</li> <li>Anchored off <u>Stark</u> with decontamination compound.</li> </ul>	:
1901-3045 5340 6 August 2010 1215-2430 3430 2500	<ul> <li>65).</li> <li>Resumpd weakdown procedures Anchored south of Berth 379.</li> <li>A working party of one officer and six entlated men from ranger ship <u>355 Stark</u> (00+1/6) case aboard to assisk in the decontamination.</li> <li>Anthored off <u>Stack</u> with decontamination cappend.</li> <li>Getget mobilizes from thedings of Sterk.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-3430 3430 1530 1537	<ul> <li>65).</li> <li>Resumpd weak-block procedures Anchored south of Berth 379.</li> <li>A working party of one offices and six entiated men from ranger ship <u>355 Stark</u> (00+10) came aboard to anwisk in this decontamination.</li> <li>Anothered off Sherk Washed down <u>Stark</u> with decontamination compound.</li> <li>Geiget monitors from teadings of Stork.</li> <li>Anothered south of berth 1/9.</li> <li>Underway for target ship 050 Mission 100</li> </ul>	:
1901-3045 5340 6 August 2010 1235-2430 2430 2500 2537 9 August 0802	<ul> <li>dS).</li> <li>Resumpd weahdare procedures Anchored south of Berth 379.</li> <li>A working party of one offices and six entiated men from ranger ship <u>355 Stark</u> (00+15) care aboard to ansisk in its decontamination.</li> <li>Anthored off <u>Stark</u> with decontamination carpoind.</li> <li>Geiget monitors took tradings of Stark.</li> <li>Anthored south of berth 100.</li> <li>Underway for target ship 050 Mission 100- 4080.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-3430 3430 1530 1537 7 August 0802 0920-1053	<ul> <li>65).</li> <li>Respective weak-basic procedures Anchored south of Berth 379.</li> <li>A moreing party of one officer and six entrated men from ranger ship USS Stary (00-416) case aboatd to assist in its decontactional anthored off Stark Washed down Stark with decontactination rangement.</li> <li>Geiget monitors from treadings of Stark. Anthored south of Berth 119.</li> <li>Undo:way for target ship USC Without 100-4085.</li> <li>Washed down Withon.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-3430 3430 1500 1537 7 August 0802 0920-1050 1205 13/5	<ul> <li>dS).</li> <li>Rescard weathdown procedures Anchored south of Berth X79.</li> <li>A worwing party of one officer and six entiated men from ranger ship <u>USS Stary</u> (00-416) care aboard to awaist in its decontaximation. Anchored off <u>Stark</u> Washed down <u>Stark</u> with decontamination corpound.</li> <li>Geiget monitors from twedings of Stark. Anchored south of berth 118.</li> <li>Underway for target ship USC Wisher 100- 4000.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-3430 3430 1530 1537 7 August 0802 0920-1053 1205 1375 1327 2345	<ul> <li>dS).</li> <li>Respective weak-bases proceedsnees</li> <li>Anchored south of Berth X79.</li> <li>A working party of one offices and six entraced men from ranger ship <u>USS Stark</u> (00+1/0) came aboard to anwisk in its decontamination.</li> <li>Anchored off <u>Stark</u> with decontamination corpound.</li> <li>Geiget monitors from teadings of Stark.</li> <li>Underway for target ship USC Without (00+408).</li> <li>Washed down <u>Without</u>.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-3430 3430 1500 1537 7 August 0802 0920-1050 1205 13/5	<ul> <li>dS).</li> <li>Respectively weak-based proceederate Anchored south of Berth 379.</li> <li>A working party of one officer and six entiated men from ranger ship <u>355 Stark</u> (00+15) care aboard to ansisk in its decontamination.</li> <li>Anchored down <u>Stark</u> with decontamination compound.</li> <li>Geiget monitors took tradings of Stark.</li> <li>Anthored south of berth 100.</li> <li>Underway for target ship USC Mission (00 408).</li> <li>Washed down <u>Witson</u>.</li> <li>Washed down Witson.</li> <li>Disebarked monitor to koven.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-3430 3430 1500 1537 7 August 0002 0002 0002 0002 0002 1327 1345 1327 1345 1401	<ul> <li>dS).</li> <li>Respective weak-bases proceedsnees</li> <li>Anchored south of Berth X79.</li> <li>A working party of one offices and six entraced men from ranger ship <u>USS Stark</u> (00+1/0) came aboard to anwisk in its decontamination.</li> <li>Anchored off <u>Stark</u> with decontamination corpound.</li> <li>Geiget monitors from teadings of Stark.</li> <li>Underway for target ship USC Without (00+408).</li> <li>Washed down <u>Without</u>.</li> </ul>	:
4901-3045 5340 6 August 1010 1215-3430 3430 1500 1537 7 August 0802 0920-1050 1275 1375 1327 1345 1407 1642	<ul> <li>ds).</li> <li>Respective weak-descer proceedures Anchored south of berth X79.</li> <li>A worwing party of one officer and six entisted men from ranger ship USS Stary (00-416) case aboard to assist in its decontactorytion.</li> <li>Anchored off Stack with decontamination carpoind.</li> <li>Geiget monitors from twedings of Steck.</li> <li>Anchored south of berth 100.</li> <li>Underway for target ship USS Wither (00 408).</li> <li>Washed down Witten.</li> <li>Washed down Witten.</li> <li>Underway for target magnings of Witten.</li> <li>Underway for Facen.</li> <li>Diseabarked monitor (o <u>Roven</u>.</li> <li>Anchored in Berth 52. Similardi.</li> </ul>	:
(901-3045 5340 6 August 5010 5235-3430 3430 5500 557 3 August 0802 0920-1050 1327 5345 1327 5345 1327 5345 1401 1632	<ul> <li>dS).</li> <li>Respectively weak-based proceederate Anchored south of Berth 379.</li> <li>A working party of one officer and six entiated men from ranger ship <u>355 Stark</u> (00+15) care aboard to ansisk in its decontamination.</li> <li>Anchored down <u>Stark</u> with decontamination compound.</li> <li>Geiget monitors took tradings of Stark.</li> <li>Anthored south of berth 100.</li> <li>Underway for target ship USC Mission (00 408).</li> <li>Washed down <u>Witson</u>.</li> <li>Washed down Witson.</li> <li>Disebarked monitor to koven.</li> </ul>	: :
4901-3045 5340 6 August 1010 5235-3430 5430 1537 7 Acqust 0002 0002 0002 0002 0002 0002 0002 1327 2345 1327 2345 1327 2345 1401 1632 1644 9 August	<ul> <li>ds).</li> <li>Respective weak-descer proceedures Anchored south of berth X79.</li> <li>A worwing party of one officer and six entisted men from ranger ship USS Stary (00-416) case aboard to assist in its decontactorytion.</li> <li>Anchored off Stack with decontamination carpoind.</li> <li>Geiget monitors from twedings of Steck.</li> <li>Anchored south of berth 100.</li> <li>Underway for target ship USS Wither (00 408).</li> <li>Washed down Witten.</li> <li>Washed down Witten.</li> <li>Washed down Witten.</li> <li>Bashed down Witten.</li> <li>Bashed down Witten.</li> <li>Bashed down Witten.</li> <li>Diseabarked monitors (o <u>Roven</u>. Anchored to berth 52. State of Witten.</li> </ul>	:
4901-3045 5340 6 August 1010 1235-2430 3430 (500 1537 3 August 0002 0002 0002 0002 0002 0002 0002 0002 1255 (175 137 (530) 137 (530) 1401 1612 1644 9 August	<ul> <li>ds).</li> <li>Respectively weak-based proceedings: Another south of berth 379.</li> <li>A working party of one officer and six entiated men from ranger ship <u>355 Stark</u> (00-416) came aboard to awaist in this decontamination.</li> <li>Anothered off Sherk Washed down <u>Stark</u> with decontamination corpound.</li> <li>Geiger monitors took teadings of Stark.</li> <li>While way for target ship 050 Washer 100 4085.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Sated down Wilson.</li> <li>Disebarked monitors (a <u>Roven</u>. Anothered to Berth 52. Stark of Wilson.</li> </ul>	:
4901-3045 5340 6 August 1010 5235-3430 5430 1537 7 Acqust 0002 0002 0002 0002 0002 0002 0002 1327 2345 1327 2345 1327 2345 1401 1632 1644 9 August	<ul> <li>dS).</li> <li>Respectively weak-based proceederate Anchored south of Berth 379.</li> <li>A working party of one officer and six entiated men free ranger ship <u>355 Stark</u> (00+16) care aboard to assist in this decontampnation.</li> <li>Anchored off Stark With decontamination compound.</li> <li>Geiget monitors took treatings of Stark.</li> <li>Anthored south of berth 100.</li> <li>Underway for target ship 050 Widgen (00 408).</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Sated accountings of Witson.</li> <li>Sated down Witson.</li> <li>Satered to Berth 50.</li> <li>Underway for Penspola.</li> </ul>	
(901-3045 5340 6 August 1010 5215-3430 3430 1500 1537 9 August 1632 1632 1644 9 August 1045	<ul> <li>dS).</li> <li>Respective weak-based proceedings: A moreing party of one officer and six entiated men from ranger ship <u>USS Stark</u> (00-410) care aboard to ansist in this decontamination. Anothered off <u>Stark</u> Washed down <u>Stark</u> with decontamination corpound.</li> <li>Geiget monitors from tradings of Stark. Anothered south of berth 110.</li> <li>Underway for target ship USC Wisher (00- 408).</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Stark down Wilson.</li> <li>Stark a monitors (a haven. Disenbarked monitors (a haven. Started to berth 50.</li> <li>Underway for Pensenta. Started to berth 50.</li> </ul>	
4901-3045 5340 6 August 1010 1235-3430 3235-3430 3430 1500 1537 9 August 1642 1644 9 August 1045 1103 1245	<ul> <li>dS). Respectively weather proceedures Anchored south of Berth X79.</li> <li>A working party of one offices and six entiated men from ranger thip <u>USS Stark</u> (00+1/0) care aboard to ansist in its decontamination. Anothered off <u>Stark</u> Washed down <u>Stark</u> with decontamination carpoind. Geiget monitors from tradings of Stark. Anothered south of berth 1/9.</li> <li>Underway for target ship USC Wisher (00 408). Washed down Wilson. Washed down Wilson. Washed down Wilson. Geiget monitors rack mentions of <u>Milmon</u>. Underway for <u>Easen</u>. Disebarked mentros (a <u>Hoven</u>. Anothered in berth 52. Start) stall Shifted to berth 50.</li> <li>Underway for <u>Penspenta</u>. Srood by <u>Menspenta</u>. Srood by <u>Menspenta</u>. Srood by <u>Menspenta</u>. Srood by <u>Menspenta</u>.</li> </ul>	
4901-3045 5340 6 August 1010 1235-3430 3235-3430 3430 (500 1537 9 August 1632 1645 1645 1645 10 August 1045 1100-1107 3103	<ul> <li>dS).</li> <li>Respective weak-based proceederate Anchored south of Berth 379.</li> <li>A working party of one officer and six entiated men from ranger ship <u>355 Stark</u> (00+10) care aboard to anyist in this decontamination.</li> <li>Anothered off <u>Sheek</u> Washed down <u>Stark</u> with decontamination corpound.</li> <li>Geiget monitors from tradings of Stark.</li> <li>Underway for target ship USC Wishor 100 4085.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Bashed down Witson.</li> <li>Bashed down Witson.</li> <li>Diwabarked monitors (a <u>Raven</u>. Anchored of <u>Raven</u>.</li> <li>Diwabarked monitors (a <u>Raven</u>. Anchored in berth 52. Alkini Atoli Shifted to berth 50.</li> <li>Underway for <u>Pensponta</u>. Sroud by <u>wensponda</u>.</li> <li>Underway for Sink tatus. Anchored alongolde cafts.</li> <li>Widerway for <u>US Remevolynce</u> (AM-10)</li> </ul>	
(901-3045 5340 6 August 1010 1215-2430 3215-2430 3430 (500- 1537 3430 (500- 1537 3430 (500- 1537 1327 (500- 1642 1642 1642 1645 1045 100-1107 3103 1245 140	<ul> <li>dS). Rescard weathdown proceedures Anchored south of berth 379.</li> <li>A worwing party of one officer and six entisted men from ranger ship <u>USS Stary</u> (00+16) case aboat to assist in its decontactorytion. Anchored off <u>Stack</u> with decontamination carpoind. Geiget monitors from treatings of Steck. Anthored south of berth 100.</li> <li>Undo:way for target ship USC Widgen (00 400).</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Geiget monitors fork readings of Wilmon (00 400).</li> <li>Washed down Wilson.</li> <li>State ambrase fork readings of Wilmon.</li> <li>Diseabarked monitor (0 <u>Rowen</u>. Anchored on berth 52. Alking Atoli Shifted to berth 50.</li> <li>Undorway for Pensenta. Stood by <u>Mensolia</u>.</li> <li>Stood by Mensolia.</li> <li>Stood by Mensolia.</li> <li>Wherway to Sink rates.</li> <li>Anchored alongside cafts.</li> <li>Widerway for YES Whereon (AF-2).</li> </ul>	
4901-3045 5340 6 August 1010 1235-3430 3235-3430 3430 (500 1537 9 August 1632 1645 1645 1645 10 August 1045 1100-1107 3103	<ul> <li>dS). Rescard weathdown procedures Anchored south of berth 379.</li> <li>A working party of one officer and six entiated men from ranger ship 105 Stary (00-416) case aboat to assist in its decontactmention. Anchored off Stark with decontamination carpoind.</li> <li>Geiget monitors from teachings of Steck. Anchored south of berth 100.</li> <li>Underway for target ship 050 Wideps 100 4085.</li> <li>Washed down Witson.</li> <li>Geiget monitors rack mentions of Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Stone way for target ship 050 Wideps 100 4085.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Washed down Witson.</li> <li>Stone way for Pensenta.</li> <li>Stone by Pensenta.</li> <li>Stone by Pensenta.</li> <li>Stone of the Wide Pensenta.</li> <li>Stone of Wide Wide Pensental Pens</li></ul>	
(901-3045 5340 6 August 1010 1215-2430 3215-2430 3430 (500- 1537 3430 (500- 1537 3430 (500- 1537 1327 (500- 1642 1642 1642 1645 1045 100-1107 3103 1245 140	<ul> <li>dS). Rescard weathdown proceedures Anchored south of berth 379.</li> <li>A worwing party of one officer and six entisted men from ranger ship <u>USS Stary</u> (00+16) case aboat to assist in its decontactorytion. Anchored off <u>Stack</u> with decontamination carpoind. Geiget monitors from treatings of Steck. Anthored south of berth 100.</li> <li>Undo:way for target ship USC Widgen (00 400).</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Washed down Wilson.</li> <li>Geiget monitors fork readings of Wilmon (00 400).</li> <li>Washed down Wilson.</li> <li>State ambrase fork readings of Wilmon.</li> <li>Diseabarked monitor (0 <u>Rowen</u>. Anchored on berth 52. Alking Atoli Shifted to berth 50.</li> <li>Undorway for Pensenta. Stood by <u>Mensolia</u>.</li> <li>Stood by Mensolia.</li> <li>Stood by Mensolia.</li> <li>Wherway to Sink rates.</li> <li>Anchored alongside cafts.</li> <li>Widerway for YES Whereon (AF-2).</li> </ul>	

14 August 0.152 0810-CR40 0840 0850 1240	Underway on earges ship U <u>SS Geneva</u> TAPA- 967 to take #10-21 in tow. Stood ait JAL-22. Onderway for Derch Anchored Dio Derch SD. Anchored Dio Vards (1)20 meters) Bouth of Decch DJ.
19 August 1900	Anchored near Wijson.
1157	underway with wijyon in tow, starting out of the ispon toward Kwajeleth Atuil.
21 August	
0055 1024	Anchored Wilson of Residentia Atoli. Anchored at Kwajaleka Atoli.
72 August	
0815-1120	Assisted USS Preserver (ARS 8) on coving nevads.
1126	Departed Anajalain Anaid for Bikini Atal:
21 August	
0(AŬ	Anobered in berth 92. Bikini Atelit.
1512	Underway to take target site USS Wahn <u>wright</u> (DD-019) in row for Kwujalein. Departed Hikini Atobi for Kwajaloin Atobi
1540	Departed making Atobi for Kwajajote Atobi with Wainwedght in text.
25 August	
0550	Argived Keejalein Arall and began ro- enchor Mainwriadh:
0820	Underway froe Mainwright.
1795	Lage for playes Acoly.
26 August 0650	and and all and b
1243	Arciae4.000151.ata0.000. Took respect ship 258_jughes (DS 410) in .
1252	cars wiking any <u>set</u> again the training the set of the
17.17	care and the association against an even
28 August	Arcived as Keajalebri ksolu and Anchored. Rughes:
2215	teft for paking Acola.
29 Negast	
0606	Annopend in besch (88. Alethic Acabi).
2 September	
1345	Lost Dikani Atali for Resjatein kaoli Lowing LCC 727 and LC1-832.
) Seprember	Accived Revisite's and anchored CC1-327 and CC1 332
0958	Anchored in Zerih A.
6 September	Departed for Powel Hatbor with YE 733 in IQu.
19 September	Arrived at Searl Harbor.
	478 184

#### ATA-185

Crew Size: 4) Bikinh Atoli Arrival: Botore 25 June Bikinh Atoli Departure 5 September 1986 Saot ABLE Colditon: Approximately 21 nml (50 km) f Shot BATER Location: TR cal (23 km) ESE Decontamination Eccation: San Diego Deergatonal Clearature 11 December 1986 Funds Clearature: 18 January 1941

## ATA-185

1451	NTA 185 pore shi	lercthan Max an ausbliany orman tug uper as a sup- p in Tu 1.2.7 (Salwage Ledt). Its func Le Atloaging, cepalitag, and linetighting.	CR:2 CP40 1854	Ma <u>Gety</u> whotored. Case off the whot from Ma <u>gato</u> , proceeding to anchorage. Restored in best5 7%.
Shet	Auto ()	luày. Dadei	11 July 2713	inderway, proceeding to catger whip <u>USS</u>
ارت ا	יין ננר:	Steared in company with \$2 1.2.7. Anchored is beth Rogers Wikini Atoli.	6745	Arkensus (BB-23). Passed wain treing wire to <u>Arkensas</u> through its steen choics, let go monitry
2 JJ	OCI Ó	Laying to in vicinity of USS <u>H</u> aven side- 12: to pick up thesate Muniter.	2010-1435 8449	Uses: Commenced statuing Ack <u>annes</u> to new herth. Underway to bosts 73.
	0855	Laying to in vicinity of target thip - Sakawa.	1505	Probled (a beach /0)
	1042 1310	<u>Saka</u> wa Kank. Underway Nu tange: ship USS <u>D</u> ole <u>onadenyo</u> (CML 22).	0924 0924	Underway ex couse to tasget ably <u>USS</u> Newaga (NP-36).
1.	15 2442	Transferred soloological equipment from <u>Todepédé</u> ese, la 65 <u>8 Regigele é</u> t <u>ilité</u> (189	2950	Laying to in vicinity of <u>Neva</u> da. nexisting (other (Sont.
	1522	14) Anchoseá in Deith Pogur.	: 300	Underseay, scanding by to assist ATR 87 coving Newada
			1500	secured main for which to stain of Nevado.
5 26			1515	Case off salo new when from Nevada
	3730 3912	Coderway to USS Whatton the TL. Laying to in vicinity of Serth 89.	1525	Second low time to post quarter of
	2945	Took aboard boarding party from <u>Whatton</u> .	1,700	Case off bow line from Nevada.
	3847	Judetway to Heren.	17:0	Underway to anchorage.
	Q852	Leying to in vicinity of News.	2725	Anchored in Geeth Tay Blitter
	0854	Specding party aboard		
	C955	Underway so place boasding Leas aboard - target vessel VD (60,	yhul 12 1930	underway, proceeding to carget ship still
	2910	Moored portside to YorleV: beardStd team aboard	2653	<u>Striatoria</u> (CV 3) Arrived Sacaloga, scanding by Lo assist
	1035	boarding team serurned aboard: underway to amail forther acdors	0300	lo shitsing it to new berrs. Paksed Main it≫ line to Sarat <u>ok</u> e an⊓
	2305	Es coure en let <u>erio</u> n.		commenced assessering as recensery to
	:122	laying up to vicinity of <u>Wharton</u> s board ing upam discriptioned.	::40	plating it in a new berth. Case off from datatoga, laying to in-
	1016	Reinford to Serth 73.	1550	violatiy. Proceeden zu tarnez ship (JSS Gencongely
6-34	17 1715	Ariived at terget ship <u>Mag</u> ato, laying to		(APA B1) and shood by to assist ATA 192 as betterbary 30 hours betterbary 30 hours a tractede.
	1415	availing instructions.	. 125	Secured from standing by dury with Day
	1432	Moored to N <u>egato</u> 's starboard side. Resard main wire to <u>Neg</u> ato to assist in	1150	con <u>age</u> . Apphored to perch 73, BiXini.
		[Bfting Karato 5 anchor, Atter trying	(b) 1.2 m	
		<pre>unsublessibility to ifit <u>Megaty</u>'s Abchot with coving matchive, compared deaving on bowl, (arble with sterr regets), chain coming in slowly</pre>	7160 ۲۳:۵۲	Otherwed explosion in vicinity of cargor vegael August 13.
	1738	Sociality in Start Megators, and hot,	20 Jušy	
	1812	Or Seaway from alongside Magalo.	0500	Indensity and proceeded in target subm
		Aschared in Berly 73.	0010	rine <u>USS Ture</u> (25-203). Nacewid performed to particle of T <u>ure</u> and
7 .:u	<u> 2510</u>	Sofermary, proceeding to Nasala.	67.25	legan beauting in <u>two</u> e's part anthor. <u>Two</u> e's anthor secured aboard ATA-,Ab
	9696	Passed wain saw wire to <u>Maga</u> to through The start clucks.	2305	proceeding with heaving in thein. Tung underway to whith barths, with ATA-
	2007	<u>Mangelo</u> dut Loose from munsing been.		(85 alongs)de exclusion as necessary.
	1610	Commenced cowing hagain to meetly assigned	2 <b>9</b> 20	ione anchored in new beth.
		bet the	0920	Secured from excloring th <u>re</u> s and gou
	1151 1155	<u>Nagai</u> s will go singboard apphar. Scanding by <u>Sagato</u> to prevent swinging.	6565 1250	soverway too <u>USS Quite</u> n (AS-111). Secalaed provisions from Palion.
8 Ju	-¥	Mourse to steen of Negalo by sain for	1 •00	Anchored to mestin 73.
		where an hereit 162.	27 Jujy	
9 JU			2400	Undertway proceeding to target submatime Apogen 195-1081.
	0735	USS Current (ARS 72) commenced rowing	0650	Artives at Apprese and Joy to, Awayting Instructions.
		<u>Magato</u> forward, ATA-165 standing by <u>Na</u> gato's stein and assisting Current as nanyotxaly.	0701	Anchoced 240 yases (220 meters) from Apogen.

## ATA-185

22 July

0715	Passed T-Inch wardia Line to Apogen and	2 August	Shifted to anciencege posite of borth 178.
	committee waving around to bring its		
	heading to 8507 pilot to Subwiding.	t August	Shifted to begab 73.
1010	apergon submy roed.	-	
2054	Buoyed line to Apogon and cast off Incom-	LK August	Shafted to berth 231 a
	Cutmoring .	• • •	
1000	chockway ta: anthorage.	CONCLUSION IN CONCLUSION	
26.29	Anchozed in berth 12.	6935	inderway for Nyugila,
		C950	Acrowed as Hevada.
25 July		2756-1600	factured this feetaless (ARS 42) alongside
1015	Underway to Rongelap Atol( with 127 ()84		Heyada.
	and LCT-1420 in cow.	9610	Anchared in bersh (8, Bikin).
		1010	
24 Ju2y		19 August	
2575	Noverway for Bikink.	61¢/	Freeded to Pennyluspie.
2.174	NUMERAL CITE DISTING.	0840	kasked the to Reclater moored to poss-
Course Press 2 12	De Lula Okter	C CHARL	· · · · · · · · · · · · · · · · · · ·
SHUE SAKEA (A	25 July, 0835;	0846-1830	Side of Pennsylvenia.
×		0846-1620	Assisted Archateer.
25 July	Rendezvoused with TV 1.7.7 in Mercury	1645	Anchosed in Besth 18, Dikiri.
	area beiere BAKER deronasion.		
1155	Anofracum in Bisini Lagoon.	20 Magyar	
4830	Radiological Ponisors reported Sheard.	6432	Proceeded to promylyngia.
		0955 1230	Passed line to Recisiner: moored pariside
20 July			of Pennaylvania and Recience.
0/58	Proceeded to target actay on relative	<b>₽</b> 310	Node Sant to 455 Chowecor (MTE 1001 to
	radialogical instruments from ranger		assist in towing Pennsylvania's stein
	Abtin Sagato (0820-0903), USS New Yolk		alvenet.
	(BB-34) (3000), and USS Pensachle (CA 24)	1354	Released by Reclaimer and reformed to
	(1820). These instruments went to Mairing	- /24	ancherage.
	for Study.	\$412	Nechored in Seria 18, Biking,
	for scale.		NWING IN WITH U. BINNIN
80 July		21 Average	
0852-0900	Decoursed and blood at the summary down	6752	Decompled to silving at the Verb
0872-0400	Recovered sadialogical instruments from	C340	Proceeded to vicinity of <u>New York</u> .
	terget shop 360 Bannet (ASE 60).	(3 <b>6</b> 0	Passed line to Rectainer to ensist in
0932-0915	Recovered radiological instruments from		boiding Recigner off ande of New York.
	sarges ship Prinz Dugen.	2708	Cast off from Meclainer.
0949-0910	Recovered rudialogical instruments from	£307	Anchosed in Derth 18. Bikini.
	sarget ship (KK: <u>Pepa</u> sylv <u>ania</u> (MH-)4)		
1000-1020	Recovered radialogical instruments from	25 Muquisa	
	target ship USS Caligan (APA 15).	5330	proceeded to vicinity of Sneu Asland to
1023 1027	Recovered redivinging, instruments from		exclusion uses algoing (495-33) in tracing the
	Gasconade .		ger ship USS Pallon (AVA-81).
2078	Renévated (adjuingion) incluments from	1730	woocod participle to Patton to recover
	target ship LTS Bilsnow (APA-65).		Clear is their pendant.
3100	Reveneer (adiologica) instrumenta (16	2030	Privased from Caty by Clara.
	target ship USS Salt jake City (CA-25).	1245	Ancha: ed in berth bù, Bikini.
2338	Recovered adialogical instantemets from		
	Kevada,	1 September	
1144		1700	Hedeman by statety of becaut submaries
1144	Recovered radiological instruments from the	3 (00	Underway to vicinity of target submatine net sets tark institute
1223	USS_Bauly_IMPA_68) Recommend_ redinications, uninverses dicom	AD.L	USS Skipjeck (SS-J84). Decoured all whiterachie completed during
1223	Recovered pathological instruments from .	18  <b>5</b>	Ancoured eis skiptack's starboard qualter
11.34	[notopoderwo.]		keeping alight Strain on Line to Skipjank
1(40.1)(2	Laying to in vicinity of Repreth Mitchey		ro knep it olt side of USS Widgeon
	to rearrive all insteamenass.		(ASA E).
1316	Care (Coddwed (Adiobratics) tolerance.		
2429	Ancadeve in berch King.	<ol> <li>September</li> </ol>	
		5002	Cent olf from Shipjerk.
1 August		1036	Underway for USS Conserver LARS-397.
0730	boderway for second hydrony.	1778	Procoeding to target vessel VC-81.
CRIN	Birthest at Karneth Milting,	1540	Proceeding out of lagoon in Lenders with
C85 1	Recovered radialogical instruments from		Conserver rewing YOG-81. LCT-il64, and
	Bruie.		107 1420 to knothlets.
0012	Recordent radiocogleal sheepurchis trop		
	Independence,	7 September	
9935	Recovered radialogical instruments from	1125	Sheered keelaters accounted and brought
	target ship tas harpon (APA 6) .		YOG 8) Into possison So: enchorary in
5958	Recovered rediciogical instruments from		Sereh A 21.
	Gasconade.	1214	
\$21.1	· · · · · ·		Capt off the ware from Condervet
301,	Autived Vicipily of Kenneth Matting and	(A)F	Anchored in vicinity of besch C. Rwaja-
	transferred radiological thetroments to		3-14
	eane()) (people)		
1030	Ship and crew reached Jaily rolerence of	8 September	
	(adioac) by ity.	1115	Monitots trom Haven care aboaid to in
)100	Anchored in beath K. 20kin).		spore for redicacelevity.
			-

## ATA-185 8 September

2140	Moniners left after declaring ship redio logically sets.	1130	Noneud alongside Skipjack and commenced supplying in with water.
3445 20. Konsumber	En reste in Peorl Markas. Actived Avail Markas.	120C 1347	Secured from transforring water. Noored to LSM 60 and commensed trans- ferting water.
20		1445	Secured Flanckerring water
	47A-163	1450 1525	Cast off all lines. Bropped auchor in beach 198.
Crea Stael 3	13	LD July	
8141ch 415'	Ar-lwa' - Hefore ' July 1946 Departure, - 24 August 1946	0810-(9;0	Transfected water to target submerlike $(\underline{SG})$ -Skate (SS-205).
	ավիրը, 28 տարի (52 հար) հը։ Ավվիրը, 24 տարի (45 հար) [86	C918 0954-;048	ansterneng ta 1977-60. Transferted water to 1934-60.
	ion Estation: San D'ess	1405	anderway to target ship <u>VSS 15T-545</u>
Operantonal D	learance. 6 kovember 1946		smarching for a piece of tamber, usable
"leak Volt And	n e - By 22 Maxembri 1945 Liverdhan	1550	to locate locate, drifting timber Acclored in Besth 160.
	was an aurillary ocean iug used as a sup-	13 July	
pors sh	ip in TC 1.8.1 (Report and Service Unit). colors were salvaging, cowing, and emer	0848 (109	Record storagetic target ship ( <u>755 Pation</u> (274-81).
OCCAN DE	pole were on damaged larget versels	1)26	Archored in Death 168
Shot ABLE 17	Ju's, C900>	LS July 12:2	Depailed Biginj Atoli for Dongelap Atoli
1 Joly 1950	Amenoyed to perio 365. Birghi Aboli		with 107-1405 to town
1936	wadmoled is obtain year bining waar.	17 July	
2 July		Cânc	Anchored as Rongelap Rtoil.
OBUG	Underway to esubst USS Shour (ATF-75) in Munichrig 2007 29.	C836	beparted Rongelay to return to Eininf Might
\$722	Anchored to viriality of YM aportog	1874	Anglest at Miking Atoli
3 July	Recovered worker and contract uss pressue	33 July	
,	Cale (API 44) and completed mounted along a side overhight.	1254	Underway for Homgelay Atoll
		24 July	
6 July GR05	Monited alongside USS Ajon (AB C) and com	1004 1640	Arrived at Rongelap Aroll. Departed Rongelap Atoll.
3959	Menned feading weiting angulganat. Cast dif linds underway for target ship USS Arbansas (334-331 to defiver two ca	Shoi 140[8 r)	25 July, <b>0</b> 5)51
	mels obtained from USS Diskie (MD-14).	25 July	
1030	Alongside <u>Alkarsis</u> and delawered camels. Underway For target ship USB Pensacola (CA-24).	C855 8600	In Packadd ates. Moosed at Pongelap Augli.
1047-1145	Noores alongside Pensagoja ant univaded - equipaent.	10 July 1613	1#5: Rongelap Mtotl.
1141	Cast off Lives: underway for target ship		
1200-1105	<u>189 Selt Labe City</u> (CA-25). Heared stongelds Sele Labe Club and us	33 July Code	Arrived at fitking stoll: spent the day
1200-1305	Noored alongside Sait Lake City and un Deaded equipment: sfrer uninsding equip- ment underway for target ship <u>Negalo</u> to	COL	performing routine duties not involving target ships.
	pick up two cameis.	1900	Aschered in berch 117.
1340	Dirked up canois, underway for terms whip Palma Degen to pick up two camela.	5 August	
1409	Picked up come is from <u>Prinz Sugn</u> . underway for targot ship USS Permaylements	0855-0946	Hoorno next to sarget ship <u>USS Stack</u> (DD- 406) to pick up depite charges.
	(all 16) to pick up one camel.	121	Harped depth charges overboard.
1500	Picked up one camel from Pernsylvania. Underway for various whips to deliver	1323	Anchored near berch K.
1630	cemeis. Dellvered two cameis to <u>Jeconolo</u> .	P August 1428	Anchored mean sarges weaked (0)-620 in
1645	Delivered one Camel to Bait Lake City.		tow 11 to the Swoch.
1:15	Delivered two rameis to US <u>R Nevada</u> (RR- 35:.	2505-1506 1525	kauled ICT-620 off heach. IA2-620 the6 up obengside statboard side.
1.911	Underwey to assigned anchorage.	1545	Underway with CCI 620 alongside shifting
1600	Anchozeć ta besta 168. Bikini.	1551	hersha. Anchored off Bakins island wear coi 620.
7 վակդ	Hadarusu Fer sugger - Sector (MR 201-	1.2 1	
1025	Underway for targer submarine <u>DSS Skip</u> - <u>1408</u> (SS-184) to supply water.	10 Nogusa 0697 (9932 11313	Assisted in staking LC: 620. Anchored in vitinity of menth 168.
			services and the second of the second second

## ATA-187

## ATA-187 10 August

1700	Vadernay to Larger ship <u>USS Geneva</u> Hask- Bbi to Gellawr two camels.
1816	Apconted in Serie 369.
12 Mogane	
1549	Rooted partside to fatget ship U <u>SS</u> LST-
	i25. remaining them until 14 August.
14 August	
0600	Enderway free acongside LSE_125 shifting
	positions.
0602 CS10	Representation of the point of the second se
	125 bn 204.
0735	Underway from allongside LDT-325. Jaying to to prepare to put the time over to
	even of <u>487-125</u> .
0865	One bow like mode fast to steen of <u>cor</u> 125 to essible Manager in instructions inset
0838	Runner underway towing <u>[57-125</u> and MTA- 18) astern.
1508	Let go of one time
1158	755 fail_River (CA-131) opened fire on
1404	Moored to USS Expres (ND-09).
1626	Anchored in vicinity of bergn 147.
LS July	
0850 1205	Anchored in percentil
1479	Anchored in pesth 4)
16 August 0840-1974	Aschored in perio 72%.
1042	Anchotesi ta besta 4)
22 Augus:	
6926	Underway to assist XYX i24 in mooring . target ship <u>US</u> S <u>Hor</u> ghey (DD 410).
0930	Laying to off ARD 29 waiting underking
9952	of H <u>ugh</u> es. Rectod to ClarDuard side of ATA 124.
1111	Underway, scanding rift ARD-29.
1135	Herebes clear of AND 29
1405	Muchés muoited to nooting buoy.
14.12	Underway from Mugher to assist Proces.
1508 1755	Anchared in Secth 44. Underway to USS wharton (AP 7) for pen
	toca cameis.
1872	Received two cample from totas wheletant.
2827	Revelued two more camels from motor
2866	where the rease back to Anchoryge. Anchored in betth 60. Bikins.
	RECEIVED IN LECTION IN CONTRACT
24 August	
0739	Noderway From alongside (CS <u>_LST_6</u> 6) with YF 990 in the Atending out of Bigght
	Lagoon.
0930	Boderway with YM-990 in the tot Resjatein
	In snepany with YOG TO, YO-LUZ, and YO- 1991.
25 Norgast	
1550	YOC-70. YO-132. and YO-199 ordered to proceed independently and carry out pre-
	Vious our torege instructions.
1635	Compensed taking tow slongside.
1655	Cast off main tow with from 1: 990.
1850	Annored at Residents synils.
26 Junguese	
0930-1040	Redshife peolitois builded ship to west for

#### 3 September

- Underway to assist USS\_Copyrett (Amp 23) 0809 to seplace anchor on target ship USS Celulenden (ROA-73).
- 1224 Let go all lines, underway for antibutage. ansignment completed.
- Let go anchor in vicinity of K-19. Kwa-1961 jeluin.

5 September

- Underway to go alchyside target vessels (C1-127 and LC1-312. 1000
- 1030 mouted to starboard side of CCT 132 and commenced dragging them to marthwest cornee of berth add.
- 100 Anchored in berth & M. Keejelein.

12 September Departed Kwajalein for Pearl Harbor.

22 September Arrived at Pearl Harbor.

#### #1A-892

Crew street 15 Steint Ricil Arctval: 19 May 1946 Analos Atoll Departure - 2 September 1945 Shol ABLE iscalion: Approvidablely // net (50 ha) ESE Shol BALER countrol. >14 mmV (26 km) SE Decontactingtion (prodition: San Francisco Operational Licarance - M Movember 1945 Phrai Clearance - 10 February 1947 Fash COLL and Function

- ATA-192 was an auxiliary ocean tog used as a support whip in TV 1.2.7 (Setvage Unit) 115 functions included selveging. firetionting. and repairing damaged carget vessels.
- Shot ABIF (1 July, 0900)

10 June

Underway for area outside of region steaming with Tu 3.2.3. 1253

1 July 1305

- Entered the changel and proceeded to flight fires on carget ships USS <u>Wingara</u> (APL-07), <u>INS (Mang</u>en 1924-07), and <u>1</u>39; Bracken (APA-64) .
- Offered to withdraw to wost of terget 1405 area.
- 5011-3579 Reducingsing offices with mombrae aboard to inspect flactighting equipment for radioart Svley. Anchored in beeth Sugar, Readol Acabi. 1.155

باللية 2 0045-1980 Sheeting water on target wessel YO 160. 1945 1254 Moored to 100 to Depy. 1255 Second by su assist monting sarget whip MSS independency (CML-22). 1528 Anchored in betth Sugar. 3 July

1039 1433 Assisted in beaching target vessel ARSC 13 peor Enew Island. 151.1 Anchored in betth Sugar

5 July 0920 Proceeded to targer array to inspect tar cet ships. 1145 Moored to target vessel 401 732.

# ATA-192 5 July

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1027 1402 1539	10dernay to inspect target s2(1ps) Completed Inspection, Recorded in Secth 74,	1717 1845	Proceeded to enchorage. Anchored near beach Iff.
6 July 1122 1731	Reentered carget acta to assist in shift-	29 July 2930-1210	Teach inspection teams to various target ships.
:830	ing carge: Whip <u>Regara</u> to another betch. Annound in beach 74-	1454	Anchored peet betch 117.
1 July		40 JAGY	Trend target succel (CT-R)f to beerbing area off Eneu (s)and.
D528 1220	neenteend target area to assist in shift- log Wa <u>wata</u> to a new berth.	1154	Ancrosofd Sr. Berch (tem).
1329	anchured in beach 200.	1 Augus† 2038-1355	Weated down carger shaps <u>Mayrant</u> and <u>USS</u>
10 July 5725 1236	Assisted in chitting carget ship VSS Artagons LBS 33: to new berth.	1155 1417	<u>7.1ppm</u> (40-403). Proceeded to 355 Avery Island (40-76). Ancrosed in Derth Fiem.
1629 1850	Placed boarding parky aboard YO 160 1m - order to sow 1s.	7 Augus:	Shifted anthorage (.675 yeards (1.5 km) south of beach 377.
1070	Proceeded to anthorage. Anchored in Geath 76	J August	NUMBER OF DEFENSION,
11 July		2359-1023	Speayed May can L.
10: 2-1703	accluded in acting target whip top, would	:056	Proceeded to anotherage.
1739	(89-16) to Suby in target array. Anchored in Beach <sup>1</sup> 4.	(147	Arrhored neer berth 117.
12 July		6 Augus) (1935-1631	Spraged 7: 1ppc .
L041 (120	Assisted in moving target ship USS Sara-	1640	Proceeded to anchorage.
1153	(598 077 J) to new Section Anchored to berth 76	(213	Anorared over berth [les.
		A ugus r	
55 JUCY 0830-1040	keeleyed to soulce and envioe exercise	0946	Degan assisting in decentaripating Ray
0810-1005	Assisted in coving and maving target ves set 200 83 to new horit.	:220	r <u>ani</u> . Radiologicaj vechniciane boardet Mayrant.
101	Anchound meas bench \$22-8.	1009 1361	shes resurred.
16 July		1159	Anthored near threat ship DBS Stack (DD-
0510-0837	Assisted to equipe <u>Saratopa</u> to new betab.	18.35	400%
0854 15. b.C.d	Accounted in period 200.	1592 1592 1723 1725	Proceeded to <u>Marrent</u> . Wested down <u>Harre</u> nt with selfwater. Proceeded to anchogage.
17 July 0645 0950	Assibled in moving target ship <u>USU Call</u> <u>Lender</u> (MAX 77) to new botch.	: 114	Anchored in booth V4.
1059 1420	Assisted ranges whip too see the term. (CA-25) in shifting berns	9 August 1759-1827	Recred to Larget ship <u>USS Co</u> rtiand (APA)
1216	Anchored in perih 74.	1851	The Anchored St. Southern edge of Derin 5.
<ol> <li>701A</li> </ol>			
1727-1513 1874 1901	Moared to larget ship <u>USS Hayraus</u> 100 402). Moused to <u>USA Pajmyra</u> INAS(T  3).	11 Augus: 0535-1046	Assisted in curning target ship <u>USS Ces</u> Conside (APA-85) account to class fouled
:911	Anchored in Seria 24	1046	anchor thain. Proteeded to <u>USS Nill</u> coat (AM-2).
	76 July, 98151	1554	Account of Derth 18.
24 July 1255	Underway for area outside of Lagoon.	19 119(04.5 1028	Recred next to Stack.
	scentral with TU 3.2 1.	:135	Peparsed for available and with <u>Heark</u>
25 July			
1150 8249-1334	Anchored in borth film. Assisted in artempted allooge of slowing	21 August 0837 1005	Auchored Stack at Kwajalain.
13)3	Samelingg. Atchered in berth Inem.	22 Auguss	Anthored by Derth C, Beagelein Hull.
26 Co.1y		0438-1550	Acceleted in toking and antioning target
\$135 1427	Assisted is beaching damaged larger ship <u>Use sugner</u> (00-4)01.		ships Nevada and <u>Prinz</u> Eugen Delote de- perting kwejaloin Atoli far Hikini Atoli.
9491	Anthored in Seath Jiem.	23 Аздақа	Arcived at Biking Atoly.
26 July		74	
1256-1565	Austrated in cowing and braching target subtarine target (35 136).	24 August	Tock <u>Ganconste</u> le toe los Jeajalein Ancit.

		2 July	
9519 DR%2	Anchernel Gescensig as Youghless. Proceeded to USN Bekas (APM 2376.	06001060	assisted iron sat⊊
1051	Dyparted for Dikani.	117 !	witness of
		1420	First ended
21 August			te target
1014	Reacted alonguade takent forp 1855 Banger		ger vesse Abonas ed 1
1726	(APA-60). Eg reale to Belajoisto etto (act <u>ós</u> : to tea	1501	ADCOULED .
	······································	6 Juhr	
28 August	Re coule to Reajoiein.	0123-0917	TOWER Lake
			24) to 511
29 August OBSC	Anothered Pagnes on Devel 51. Kawajalein	1035-1322	Assisted   target sh
Lucs	Boared in analytical anchorage		Deuth.
		1457-164L	(Appanetication)
30 August	Departed for Bikini.	5 > 36	Acchored (
)  August		7 July	
0110	Anthoned in Secch 220, Sheini Atoli,	113 1251	Assisted :
			(APA- 193) -
2 September		1910	Ancho (+d )
0750 1529	Rearied Rest to target westing 1013.	4 July	
1524	Lett 51kint Aloi: for Gesjatein Atoli with sarget vessels LCT-1013 and sCT-705	341	Stored as
	in the		(00 \$10).
_			
4 Sepreeper 0124-1001	Machine (10) 1033 And 143-705 at \$4414	30 IL 501Y	mooted mea
0174-1001	Legal	12 July	
5041	endet way to antivorage.		Hurthes was
3   19	Anonosed in Assigned Anchosage.	12.4.1.	
7 September		17 July N'CO-0917	64541-00 MC
1145-1459	Trans Ranget Vesnel ACT/1076 in Beath.		084 Cr114
	•	t 732-5411	Assisted :
8 Seprember	Letr Kwajalelo for Pearl Machor.	1536	Anchored :
21 September	Arrived as Pearl Harpes.	23 July	
21 September	Arrived at Pearl Harper.	0730 1045	Assisted
21 September			Assisted : Mechated :
21 September	Arrived at Peer] Harper. Alk-40	0730 1045	Rechared .
Grow Star. 6	4 I H - 40 8	0730'3095 LJII Seo: 20468 ()	Rechared .
Grune Star. 6 Eikipi Ajoži	418-40 8 Arri-1: 2) May 1946	0730`3095 L311 Seq: 24549 (7 24 Jaly	Archoted . 15 Jely, 08
Grow Star. 6 Etkipi 41021 Bikipi 41031	LIN-40 8 Arrh-al: 2) May 1945 Departury. 2) August 1946	0730'3095 LJII Seo: 20468 ()	Nechared . 15 Jely, 08: Underway
Grow Star. 6 Engini 41021 Bikinh 41031 Shoi 4212 Loc	418-40 8 Arrh-al: 2) May 1946 Departury. 2) August 1946 42104 : Approximately al 1946 (30 am) 6	0730`3095 L311 Seq: 24549 (7 24 Jaly	Archoted . 15 Jely, 08
Grow Sign. 6 Englini 41021 Eikini 41031 Shot 4515 Loc Shot 84419 Lo	LIN-40 8 Arrh-al: 2) May 1945 Departury. 2) August 1946	0730`3095 L311 Seq: 24549 (7 24 Jaly	Nechared . 15 Jely, 08: Underway
Crow Sign. 6 Eikipi Aloži Bikimi Aloži Shol Ažič Loc Shol Ažič Loc Decontesinali Georatesinali	418-40 Arrikadi: 2) May 1946 Departure: 2) Jugust 1946 Astion: Approximately 2) mod (30 em; 6 oration: Se Francisco Ingerandon: 30 Francisco Ingerandon: 11 December 1946	0730`4095 L311 Seqt 244FR () 24 July 1125 35 July L837	Anchosed . % Jely, 08: Underway scouting i Anchosed :
Grow Sign. 6 Eikini 41031 Sikini 41031 Shol 4515 Loc Shol 4515 Loc Gecontestinai 1	418-40 Arrikadi: 2) May 1946 Departure: 2) Jugust 1946 Astion: Approximately 2) gob (30 em; 6 oration: Semi (20 km) SF antion: Semi (20 km) SF Decamber: 11 December 1946	0730 1045 L311 Seo: 244FR () 24 July 1125 Jf July L837 1527-1645	Anchosed . <sup>25</sup> Joly, 08: Underway scouting i Anchosed : A factorie
Crow Sign. 6 Eikini Aloži Bikini Aloži Snot Ažij Loc Snot Bakin Lo Georgenali Coeracional C Finaž Clearac	KIN-40 B Arrinal: 2) May 1946 Departure. 2) August 1946 Ation: Approphedicly 2) gapt (SD em; 5 ration tillent (2) km) SF Ion Location San Franchiro Tearanze: 11 December 1946 ce 21 Docember 1946	0730`4095 L311 Seqt 244FR () 24 July 1125 35 July L837	Anchosed . P5 Jely, 08: Underway steaming a Anchosed : A faglejo Anochos y
Crow Sign. 6 Eikini Aiobi Bikini Aiobi Shot Abif Loc Shot BARLA Lo Decontesinali Coerational C Ainab Clearan Paik Unit And ATP-40 1	LIN-40 SB Arrhwel: 2) May 1945 Departure: 2) August 1946 Atton: Approximately 2) mob (30 em) 6 station: 15 emi (20 km) 55 Smatten 15 emi (20 km) 55 S	0730 1045 L311 Seo: 244FR () 24 July 1125 Jf July L837 1527-1645	Anchosed . <sup>25</sup> Joly, 08: Underway scouting i Anchosed : A factorie
Crow Sign. 6 Eikini Alogi Sikini Alogi Shol Agit Loc Shol Agit Loc Shol Batta Lo Getontarsingi Corrational C Aloga Clearan Aloga Chig Aloga Ship Sec	418-40 Arrikadi: 2) May 1946 Departure: 2) August 1946 Astion: Approximately 2) pob (30 em) 6 oration: Son Francisco Departure: 11 December 1946 Gen 21 Docember 1946 Function Mas a respective Acean Tug used Am a Support Tu 2.2.1 (Sedecape Unit) - 214 functions	0730 1045 L311 Seo: 244FR () 24 July 1125 Jf July L837 1527-1645	Anchosed . S Jely, 08: Underway steaming a Anchosed : A racie Anochos / Anochos /
Crow Sign. 6 Eikini Atobi Bikini Atobi Shoi Abii Loo Shoi BAtig Loo Decontestinati Coerationati C Atobi Chara Atobi Chara Atobi Ship Sec Were TH	418-40 Arrivel: 2) May 1945 Departure. 2) August 1946 Action: Approximately of most (30 em) 6 oralicen til pail (20 km) 55 Son Locamion SAA Francisco Tearance: 11 December 1946 the 21 December 1946 thunction was a respect weeken tug word Am a support Tel 2.2.1 (Switcoge Unit?) Its functions lyagang firefighting, and repoils week on	0730'4045 L311 Seo: 3#KFR () 24 July 1125 J* July L837 L837 L720	Nochosed . 5 Joly, 08: Underway scouting to Anchosed : A factors Anothes / direction Underway to beach Hag
Crow Sign. 6 Eikini Atobi Bikini Atobi Shoi Abii Loo Shoi BAtig Loo Decontestinati Coerationati C Atobi Chara Atobi Chara Atobi Ship Sec Were TH	418-40 Arrikadi: 2) May 1946 Departure: 2) August 1946 Astion: Approximately 2) pob (30 em) 6 oration: Son Francisco Departure: 11 December 1946 Gen 21 Docember 1946 Function Mas a respective Acean Tug used Am a Support Tu 2.2.1 (Sedecape Unit) - 214 functions	0730'4045 L311 Seo: 3#KFR () 24 July 1125 J* July L837 L837 L720	Anchosed . S Jely, 08: Underway steaming a Anchosed : A racie Anochos / Anochos /
Crow Sign. 6 Eikini Atobi Bikini Atobi Shoi Abii Loo Shoi BAtig Loo Decontestinati Coerationati C Atobi Chara Atobi Chara Atobi Ship Sec Were TH	AIN-40 B Arrival: 2) May 1945 Departure. 2) August 1946 Ation: Approphedicly 2) mpb (SD em) 5 ration likewall [20 km] 55 conditions San Franchine likewanze: 11 December 1946 ce 21 December 1946 Function Mas a rescented and the support To 2.2.1 (Switcopy (M17)) atta functions (Vasjang, firefighting, and republic wask on target ships.	0730'4045 L311 Seq: 24KHR (7 24 July 1125 J* July 1527-1645 L720 24 July 24 July	Nochosed . 5 Joly, 08: Underway scouting to Anchosed : A factors Anothes / direction Underway to beach Hag
Crow Sign. 6 Eikini Alogi Sikini Alogi Shot Agit Loc Shot Batig Loc Shot Batig Loc Operational C Page Unit And ATP-40 i Ship Doc Mere the Gamaged Sho: ABel 41	AIN-40 B Arrival: 2) May 1945 Departure. 2) August 1946 Ation: Approphedicly 2) mpb (SD em) 5 ration likewall [20 km] 55 conditions San Franchine likewanze: 11 December 1946 ce 21 December 1946 Function Mas a rescented and the support To 2.2.1 (Switcopy (M17)) atta functions (Vasjang, firefighting, and republic wask on target ships.	0730'4045 L311 Seq: 24KHR (7 24 July 1125 24 July 1527-2645 L720 24 July	Anchosed . P5 Jely, 08: Underway Steaming a Anchosed : A facile ion Anchos 2 direction Underway 1 beach Hug Sind space Obsessed (
Crow Sign. 6 Eikini Atobi Sikini Atobi Shoi Abii Loo Shoi BAtig Loo Cecontestanii Coeratianai C Path Unit And ATP-40 a Ship be Mere th Gamaged Sho: ABet 41 10 Junar	418-40 Arrikadi: 2) May 1945 Departure. 2) August 1946 Astion: Approximately 2) mas (30 em) 6 oralican San Francisco Tearance: 11 December 1946 tearance: 11 December 1946 te 21 December 1946 thunction was a respect scean top used Am a support to 3.2.1 Isoloage (mit) atte functions lyagaag, firefighting, and repose wask on target ships. August 29001	0730'4045 L311 Seq: 244FR () 24 July 1125 J* July L837 L827 L827 24 July 24 July 2905 2115	Anchosed . Noderway steaming i Anchosed : A factors Anchosed : A factors Anchosed : Anchosed : Coderway I beach Hug Sted spec Obsessed : <u>Burgles</u> .
Crow Sign. 6 Eikini Alogi Sikini Alogi Shot Agit Loc Shot Batig Loc Shot Batig Loc Operational C Page Unit And ATP-40 i Ship Doc Mere the Gamaged Sho: ABel 41	AIN-40 B Arrivel: 2) May 1945 Departure. 2) August 1946 Astion: Approprimately of map (30 em) ( oralice for the set of the set	0730'4045 L311 Seq: 24KHR (7 24 July 1125 J* July 1527-1645 L720 24 July 24 July	Nechosed . Noderway steaming i Anchosed : A factors Anothes / direction Underway i beact Hug Sind space Obsessed ( <u>Hughes</u> , Townd tage
Crow Sign. 6 Eikini 41021 Bikini 41021 Shot Addi Loc Shot Bakin Lo Gerontarsinali Coerational C Final Clearar Faik Unit and ATR-40 s Ship Do Bere Ta Gamaged Sho: AB43 41 10 Junar L257	418-40 Arrikadi: 2) May 1945 Departure. 2) August 1946 Astion: Approximately 2) mas (30 em) 6 oralican San Francisco Tearance: 11 December 1946 tearance: 11 December 1946 te 21 December 1946 thunction was a respect scean top used Am a support to 3.2.1 Isoloage (mit) atte functions lyagaag, firefighting, and repose wask on target ships. August 29001	0730'4045 L311 Seq: 244FR () 24 July 1125 J* July L837 L827 L827 24 July 24 July 2905 2115	Anchosed . Noderway steaming i Anchosed : A factors Anchosed : A factors Anchosed : Anchosed : Coderway I beach Hug Sted spec Obsessed : <u>Burgles</u> .
Crow Sign. 6 Elkipi Alogi Sikini Alogi Shot Agit Loc Shot Batig Loc Shot Batig Loc Operational C Final Clearan Figh Unit And ATP-40 i Ship Do Bere Ta Gamaged Sho: ABel 41 10 Juna L257 I July	AIN-40 Arrivel: 2) May 1946 Departure: 2) August 1946 Attion: Approprimately 2) may (30 cm) ( oration is emi (20 km) SF ion Location San Franchire Hearance: 11 December 1946 ce 21 December 1946 Function was a respective vicean tog used Am a support TU 3.2.1 (Sm)coge (m)?) atty functions (vaglad, firefighting, and republic wask on farget ships. July, S9000 Underway for area outside of (Agoon, steamang with TV 2.2.1.	0730'4045 L311 Seqt BackA () 24 July 1125 3* July L837 L837 L837 L720 2* July 2* July 0905 1315 i 245-1414 1528	Anchosed P5 Joly, 08 Underway steaming a Anchosed A factors A factors direction Underway 1 beach Hug Sled spec Obsessed o <u>Hughes</u> Towd ters beachdag a weanchosed
Crow Sign. 6 Eikini 41021 Bikini 41021 Shot Addi Loc Shot Bakin Lo Gerontarsinali Coerational C Final Clearar Faik Unit and ATR-40 s Ship Do Bere Ta Gamaged Sho: AB43 41 10 Junar L257	AIN-40 B Arrikadi: 2) May 1945 Departure. 2) August 1946 Astion: Approximately of max (30 cm; 6 oralicen lib em] (20 km) 55 in Location Sak Franchiro Hearamen: 11 December 1946 thunction was a restue weeker 1946 thunction was a restue weeker 1946 thunction was a restue weeker 100 km Am A support to 3.2.1 (Swienger 1017) its functions ivaging, firefighting, and republic wask on targen ships. Awiy, 19800 Underway for area outside of (Agoon, steamang with TV2.1. Tells & distings shock	0730'4045 L311 Seq: 24KFR () 24 July 1125 J* July L837 1577-5445 L720 24 July 24 July 0905 2315 i 245-2414	Nechored . 25 Jely, 083 Underway steaming a Anchorwed : Anchorwed : Another / direction Underway i beach Hag Sind space Obtached : <u>Hughes</u> . Towal tars beaching a
Crow Sign. 6 Eikini Atobi Bikini Atobi Shoi Abil Loc Shoi BAkin Lo Cercontestinali Corrationali Corrational Corrational Corrational Atp-40 s Shop be Mare sub Gamaged Sho: AB43 41 30 June L257 I July 0004 23(3) 1430	AIN-40 Arrivel: 2) May 1946 Departure: 2) August 1946 Attion: Approprimately 2) may (30 cm) ( oration is emi (20 km) SF ion Location San Franchire Hearance: 11 December 1946 ce 21 December 1946 Function was a respective vicean tog used Am a support TU 3.2.1 (Sm)coge (m)?) atty functions (vaglad, firefighting, and republic wask on farget ships. July, S9000 Underway for area outside of (Agoon, steamang with TV 2.2.1.	0730'4045 L311 Seqt Backer () 24 July 1125 3* July L837 1577-1645 L720 2* July 2* July 0905 1315 i 245-1414 1528	Anchosed P5 Joly, 08 Underway steaming a Anchosed A factors A factors direction Underway 1 beach Hug Sled spec Obsessed o <u>Hughes</u> Towd ters beachdag a weanchosed
Crow Sign. 6 Eikini Alogi Shoi Agit Loo Shoi Agit Loo Shoi Agit Loo Shoi BAtig Loo Cerentasinai ( Aloga Clearan Alia Chig And Aloga Clearan Alia Chig And Ship So Mere Ta Gamaged Sho: Aget 41 Sho Juna L257 L July 0304	AIN-40 B Arrivel: 2) May 1945 Departure. 2) August 1946 Aston: Appropriedtely 2) mas (50 em) 6 reation 16 em [22 km] 56 Indication San Franchino Learance: 11 December 1946 re 21 December 1946 Function Mas a rescue scean tog used Aw a support to 2.2.1 (Swleege Unit) Sta functions (vagDag, f)refighting, and republic wask on target ships. July, 29001 Underway for area outside of Lagoon, steaming with TV 2.2.1. Pele A distinct smorth Massed the harbox and fought a title on Larget ship US Saraaoga (EV-3). Concruent on explosion on Larget chip 1855	0730 4045 L311 Seq: 244FR () 24 July 1125 J* July L837 1577-5645 L720 24 July 27 July 0905 8115 i 245-8414 1523 20 July	Anchosed . 25 Jely, 08: Underway steaming a Anchosed : A factors Anothes / direction Underway i beach Hug fied space Obsached space Shifled ho Weshed do
Crow Sign. 6 Elkipi Alogi Sikini Alogi Shot Agit Loc Shot Batig Loc Shot Batig Loc Corrational C Figs Unit And ATP-40 i Ship Son Mere im Camaged Sho: ABel 41 10 June L257 I July 0304 1313 1430 1413	AIN-40 Arrivel: 2) May 1946 Departure: 2) August 1946 Arrivel: 2) August 1946 Astion: Appropriately 2) max (30 cm) 6 pration is sell [20 km] 55 ion (possion: San Franchiro Hearanze: 11 December 1946 Function was a respectively with 19 attained and TU 2.2.1 (Selenge (MTP)) attained and target ships. July, 29000 Underway for area outside of (Agoon, steamang with TV 2.2.1. Melt a distinct shork Enteried the harbox and Sought a fire on larget ship USS Satange (UV-3). Conserved on explosion on (argus Chip (ASS Enderword on explosion on (argus Chip (ASS	0730 1045 1311 Seq: 24448 () 24 July 1325 24 July 1327-1645 1527 24 July 24 July 24 July 24 July 24 July 24 July 24 July 24 July 26 July 28 July 29 July 29 July	Anchosed . P5 Jely, 08: Underway steaming a Anchosed : Anothes / disection Underway i beach Hug Sied space Obsection Numed tors Seathing 2 Seathing 3 Seathing 3 Seathing 3 Seathing 3 Seathing 3 Seathing 4 Seathing 4
Crow Sign. 6 Eikini Atobi Bikini Atobi Shoi Abil Loc Shoi BAkin Lo Cercontestinali Corrationali Corrational Corrational Corrational Atp-40 s Shop be Mare sub Gamaged Sho: AB43 41 30 June L257 I July 0004 23(3) 1430	AIN-40 B Arrivel: 2) May 1945 Departure. 2) August 1946 Aston: Appropriedtely 2) mas (50 em) 6 reation 16 em [22 km] 56 Indication San Franchino Learance: 11 December 1946 re 21 December 1946 Function Mas a rescue scean tog used Aw a support to 2.2.1 (Swleege Unit) Sta functions (vagDag, f)refighting, and republic wask on target ships. July, 29001 Underway for area outside of Lagoon, steaming with TV 2.2.1. Pele A distinct smorth Massed the harbox and fought a title on Larget ship US Saraaoga (EV-3). Concruent on explosion on Larget chip 1855	0730 1045 1311 Seq: 24448 () 24 July 1325 24 July 1327-1645 1527 24 July 24 July 24 July 24 July 24 July 24 July 24 July 24 July 26 July 28 July 29 July 29 July	Anchosed . 25 Jely, 08: Underway steaming a Anchosed : A factors Anothes / direction Underway i beach Hug fied space Obsached space Shifled ho Weshed do
Crow Sign. 6 Elkipi Alogi Sikini Alogi Shot Agit Loc Shot Batig Loc Shot Batig Loc Corrational C Figs Unit And ATP-40 i Ship Son Berri Ta Gamaged Sho: ABel 41 10 Junar L257 I July 0304 1313 1430 1413	AIN-40 Arrivel: 2) May 1946 Departure: 2) August 1946 Astion: Approprimetely 2) max (30 cm) for ration: Approprimetely 2) max (30 cm) for learance: If December 1946 Function Mas a rescue scean tug used Am a support To 3.2.1 (Sw)copy (m17) of functions lyaglag, firefighting, and republe wask on farger ships. July, 09001 Underway for area outside of Lagoon, steamang with TV2.1. Male a distingt smore Moneyed the harbox and Sought a fire on larget ship USS Sprange (CV-3). Coverved on explosion on (area) this (35 Sudgembered (02-22). Went alongside USS Correget (August 2) for	0730 1095 1311 Seqt Bitter () 24 July 1725 J* July 1827 1827 1827 1827 24 July 24 July 27 July 0905 2015 1245-2414 1523 28 July 1825-2430	Anchosed : Noterway steaming i Anchosed : A factors A factors

2 Acty 1900-1960	assisted in clearing demonstration get ships
117 ! 14 <b>2</b> 0	From Harget Artay witnessed sinking of target ship Estama Fraceward to arthur up after stamling by the target atray while ATA-192 noored fac-
1501	ger avssel VO 160. Aforesed in Béssik Jid.
6 July 0123-0917	found Largel ship JSS Sait Lake <u>City</u> (CM 24) to big new Decisi.
1032-1355	24) re sta see server. Assisted USS Echopsel (ATP-149) in towing target ship US2 genuacols (CA 24) to new beech.
1457-1641 5736	Dransfaured (Left Soke City Setty). Anchoted in berth 139.
7 3φ(γ (113 125)	Assisted in rowing target ship USS Dawson. (APA: "9).
1910	Andhaied in beith 199.
4 July (341	Moored dent to targer ship USS (Mighes (ND \$10).
10 IL saly	resolved mext to Hughesi.
ns Srea Na Srea	Ruches underway.
17 July n'co-0917	Assisted ACA 197 on maving target ship USA Criticades (APA-77) to new position.
t 702-5611 1536	Assisted in woving racest thip tagets. Anchored in Serth 239.
23 July 0790 4045 1311	Assisted in anchoring YD 160. Recharged in berth 139.
5001 BACHR (7	5 Jely, 0835)
24 July 1125	Underway for niew outside of legeon. scowbieg with 79 L.2.7.
25 Only 1837 1577-1645 1720	Anchased in berch Chav. Sikini Atoll. A facinitation came aboard. Amoritor vame aboard under the direction of Director of Ship Materiais.
34 July	Underway to apply this Reclaimen (ARS 42) beach Hughes, then anchored in unidenri- fied spectal enchorage gear know jobang.
27 July 0905 1115	Obtaished Getger readings and washed down Burghest
i 245-2414 1528	There's arget whip USS_Fallon (APR-Bi) to beaching area. Meanchesed in betch Obus.
28 July	Shifted to unidentified special terch
29 July	
1275-2430	Washed down target ship USS New York's (89-14) wwasher surfaces using three won- trons.
9629	Anchored in unidentified special berth.

# ATR-40

30 July 0131 1332 3340	washed down New York a weather surfaces. Anterned in unidentified Sweith	29 Rogust 0825-0968	Chees raduate monitors abward to start ship, ship durated of redictoryldal activ
1101 1101 1105	Disposed of all rubbick overboard at the Jagoom's entrance. Obtained another reading of <u>May York</u> .	a September	bry. Depailed Reajoleth en coule to Pearl Mat boe via Johnston Faland with VY-591 in 100.
1235 1830 1752	Formed New Y <u>ork</u> . Anchoosed to pertingene.	yl September	Arclass Pourl Herbor
7 XUQQUX1 0451	Towerd ATR-Ef to a new betth and anchuted feet to bt.		A1A 8)
6 August 0720 (521	fact readings of forget whip ( <u>255 Pencay</u> )- vanjo (28-)8) and enshed it Commission. Atternation washed duen new York.	Shot #Bul .sc	
1544	Anthoned in unsdemidine, berth.	Decontaminali Decontaminali C	en Locutton - Puget Sound Pedrance: 13 December 1946
7 Xogodi 1857 1110 1519 -(713 1125	Mashed down <u>Pernsylvania</u> and <u>Overon</u> . Meaned down PerobylVania galan. Anchorwd in berth 199.	1456 UNIS AND ATR 57 V	se: 3y 4 January 194) Franciten was a testue ocean bug used as a support TU 1.2.1 (Selvage Chitt), its tuautions.
8 August 1810-1400	Nashed down sarget ship UCS Nevada (B))	WELE SA	lyaging, repair work, and firefighting on target vessels.
: 120	36). Aschored in usidentiiled berch.	Shee ABLA VI	July, C400)
9 hugust 0611-1618	Provided praces to Pennsylvania to prace seawater shrough portable eductors.	14521 14521	Enderway for any mission of Jamaa. Scenning with to 1.2.7
1058	Associated in unidentified bottly.	լ "հվջ	
LQ August D822 1634 1705	Conducted pumping operations on <u>Peonsyl</u> Mamig. Aschered is peach 6.	1425-1446 (527	Accived at target ship USA <u>permayivents</u> (36:18; and began fighting fires. <u>USA carged</u> them 22: stragtide to phile checking firefighting equipment for ca- dioarcivity.
32 AU7364 0935-1120	A dives cospected the ballow of 356 Pg1 Myca (Appl(1) 3).	1645	Accived all earget ship <u>DSS Coreland</u> (APA- TS) and began tighting fire. Withdrew Econ the area.
(52)	Anchored in unidentified betch.	1850	Anchored in beach King Bicini Atail.
14 August 19 August	Shifted to breat 9.	2 July 0926-1317	Assisted in scener energet white us <u>s inder</u> - gendence (CML-221.
D/28	Moored news to target ship CSS Mugloud (00-189).	.230 1445	Standing off target ship JSS Dawson (APA - 79).
04)]	Underway for Kealaisin with Mu <u>tr</u> and in . 1996.	1544	Auchored in berth King.
21 August	<b>.</b>	2101-1012 2017	Torend carget vessel ICT-1334 and moored
1025 1058-1717	Anchored Muggord at zwajabein. Proceeded to isrget ship ( <u>55 Bladen</u> 1809- 63) to transfer wulking party.	1423	is next to target weapel LCT 1115. Anchosed in Sectiv 156.
12: 7	Departed for BarthL.	6 July (745 1176	hestoled coving tacget while USS Newada
22 X.arus) 1444	Anchored in berth 20, Bikini.	1 202	(885-30) to the anchorage Archorad in betth 155.
23 Nusuni	Towed terget subwardne <u>US</u> S S <u>ta</u> te (SS 315) From Atkin: Anoli no Kwajaletn Atoli.	1 Joly 2005-1110	Shifted benths of carget ships <u>USB_Pri</u> ed
28 August 1936 1943	Incharad Share at muchalate	2225	ico 404: end VSS (citegenden (198-77). Anchored in Desth 156.
2016	Anchored <u>Ska</u> te at Reajalein. Anchored in assigned berth.	9 July 0120-1185	Assisted moving Independence to new
25-21 August	At Residents; without accound Sennay leanage for about 3 house on 25 hugset and about 7 hours on 26 and 27 hugset.	1129	beach. Agelscored in juncth IVV.

15 July		1424-1455	Pesuand washing Cesconnie.
0744-1450	Assisted shifting beaths of (eight ships) <u>wish Arula</u> (APA 56) and <u>this Pation</u> (APA-	1459 1512	Radiological achitors reboarded Gescy nade.
(5)4	813. Anchogad in bergh (55.	200 JS45 9065	
	NUNÇTX"Ç <b>ana</b> 321 DATIÇIL (231.	163[	Archared in uniden (fried berch.
7500-0650 17 7014	Stending by as earget ship <u>USS plughes</u>	1 August	
1030	400 430F andress	0805-0955	washed down <u>Brule</u> and rook Gobger read- ings.
	Undermany to Larger ship USS Generogede (JPA-851)	1304 1528	Washed down Bracken.
11C0 1120	Proceeding to anchorage. Anchored in Defta 114.	1945-1612	Radiological series were on board. Bisthem,
17 July		1612	Archaige in berth 356.
C923-1439	Assisted cowing and shifting berchs of	8 August	
	tatiget shipe yss_salt take si(y GA 25) . and Nagato.	1835-1500 1835	Kathad Anan <u>Pentangia</u> . Hoored alongside XYR 40 in berth 6.
1452	Anchored in nerth 156.		·····
23 July		Y August 0832	Standing by in vicinity of Dayson.
0690-0302	Anchored the stern of rought ship ut <u>s</u> : <u>Briegee</u> (APA-05)	2931 1227-1420	Proceeded to anchorage. Washed come <u>bassion</u> and cook deliger read-
1451-1 <b>%</b> 0		1443	logs, Anctorent in betch Lt.
1816	Anchored in borth 156.	1443	ALCOUNT IS DETEN TO:
Shot BAKER (8	1514, 0835)	LO August D624	Rocied atomistick Neverla
24 July		0620	Connected firehours to a forward manitur the ordert to each down the decks of
3224	A second upshal positor reported should		Harveste
1248	Undermany for area putside of lappon. sceaming with TU 1.2.1.	1601	disconnected all hoses. Angrouped in berth Mb.
25 july		20 August	
139	Anchored as Bikini Aceti in berth wan.	1020	Monited next to target ship VSS Scippe
26 July		1120	(95-403). Departed Bikini Acoli (or kwajalein Acoli
1541	Underway to stand cleant of perch while		with <u>Trippe</u> in the.
1924	Aschered near herrh alg.	22 149455	
20 July		1250	Antivoted Taippe at Residuets and then got undermay to assigned antivotage.
1513-3531	National Come <u>Rephra</u> with firefighting constors, then stood by while ATA 180	1512	Reparted for Biking
	beached ranger subsarine U <u>NS Bentuda</u> (SS- 335).	23 August	Returned to Bakini Atoli.
1840	NALTORIAL AND CONTA 371.	(÷)#	
29 July		24 August	Towed Alt-27 to Kwajalein Atoli.
1547-1727	Nashed down syghes and target subwarine. KSS Dentuda (SS-1)51,	λΩφων.t ΣLto	Resurred to Birtini Atolik.
1640	Anchored in unidentified Swrth.		
20 July		28 Ausgungt Jülo	Magned next to target shap USS Mustim
0855-1258	Washed down taiget unip ( <u>nb) ywniangale</u> (24-24) with fateflighting conktors.		(10-4)36
1238-1300	Took Colger readings on pensaroja.	3055	Underway for Kwajaleln Atoll with M <u>umrin</u> In tow
1458	Anchored in berth Nan.	30 August	
11 July 0955-1305	and a black of share b do a to be	0000	Anchored Musilin at Kaajalein. Then pro-
	zaid a blanket of chemical four on Penda Colo.	3303	ceeded to enchorage. Departed for Bikini.
1500	Anchored in berch Ran.	)) August	
2 Arayust 0357-1:05		:045	Recursed to Bikini Acoli.
0007-1:05	Towerd by ATR-40 to new berth How.	i September	
6 August 0818-0931	Manimet down target whip 1/85 Bracker (AFA-	\$500 8550	Hoosed maxi to target vessel LCT-1042 Late Biking Biall for Residence Back
	64).	:733	with target weakers within and water the second sec
1412-1477	inschot dam <u>Gesconede</u> Rediologitai monitors buardes G <u>escone</u> de.		Le tow

## USS Banner (APA-60)

3 September	
CB14 1274	Anothered LCT 1112 and LCT-RLS in Kwaja-
	Segn.
1242	Cored Acri (A ATP 40

- 4 September (175-160) Baddafe towpection party bounded: ship deltated radiologically salv.
- 8 September Departed Weatelein for Pears Harbor via Juberton (slead)
- 20 September Arsteed Heart Harbor.

#### 155 AVERN 15. AMD (AG-T6)

Lrew Sise (483) Sikkah Aloli Akinval, Soring 1946 Chains Aloli Cesarasie, D. August 1946 Sho: ABLE Escation: Is mat (Jélam) SI, Arna Pectral Sto: SALER Joualnon, IS met (IS am) SI, Arna Pectral Decontational Clearance, Bran Francisco Decational Clearance, Bran Francisco Lina) (Leatance, Bran Handary 1947

Task Left and Function Revery (kland, classified as a miscelleoness phipman apped as a support stap in TO (10.2 clostramon tation Unit). Its primary function were tourishing laboratory and base factionies for the Interface tation (his and Floerrootics Group, is which in Still photography, teleforming compared to Still photography, teleforming compared measuring to tatget wesself.

Shot AR. E. (1 July, 0900)

10 June

- (658 Challenberg for allow overlide of lagoon.
- 1 Zuly 1945 Atchored in Berry 54, Ulkin Acoll.
- 2 Duly (25) — Chanyest antibulation to DV:15 108 A

1/23 July Replace activities:

NACT BAKER (25 0.14, 0831)

- 25 July 2003 - Andraded St Dects D. Bikant Moul.
- 28 July 1710 - Onderway for arms Berlinny by Meder of UTF 1.

29 Suly 2029 Anthored in Swith Kine, Siking Atols.

- 30 July Shifted to Section2...
- 2 August Shifted to betth Briner.
- 7 August 2025 - Chowsed Rikins Apol) to

#### LSS BANY!R (ASA-ED)

Snew 5128. 104 She'ni Alen: Arniva' 28 May 916 She'ni Alen: Separluke - 22 May 916 She'ni Alen: Separluke - 22 August 1946 Shew Kesastani Yon Shet AB <u>Shi USS Haistina</u>u 1494-2055 Tree Litation for Stot 34498: Endi Seau Stor 48.5 Location: 1,240 yards (1.1 end St Shut 24498 Location: 2,045 yards (1.9 eau e Southied 16 Peortary 1648, near Awajahein Acoli Take Bran and Augustee. Samuer, while all accepted and a larger ressel during contrologies, the free way evaluated before wards sheet in the weather in Transport at Los (Division 9: in To L.2 & Merchans Type Unit!. Shot ABLE (1 Dely, CALE) ЭО З⊿не 1213 Completes: abandonic j ship. 7 GO2g Commanding officer with fract officers and sixing collected and seconded to Barang to .610 tospect for demage: cectured radiologiintly sate: 184C twenty top 600(theory) men polycowed always Tran East In-Net-3 July 1:15 weisinder of the crew returned to Repuer. A 4 Guly demage export stated there was by mater camage warranting any special inspertant (Reference 2). V July 1.00 Untelligened one PR / Nouve algoriate SHOP BAKEN (Parable, OBJAC 24 July dies evaluated to bott inval-25 2417 Ship heavily contactnated trop she deto nation. Grew remained shoard Born thead A August Coew transferred to 950 lwsar (MPD 251). 4 Augustia Communicating officer togs officers, and pine colligied per briefded Bonnet with 9845 1000 Director of Ship Material tepretenzatives to insport for damage. Incoertion party performed to beyon gates define log gives to evidence that the core rehosized after 9 August. 11 August Comparisons officer reported no subject damage of fixeding that required special Louped (app. 17.39 August Crow Stylestund to USS Seorge Clypper (AFA 271: U<u>SS Mayon</u> CUS-121: USS Fail River 104 1711: USS Dister CUD 140: semesticed target only USS Coneva (APA-96), and Sexar for transportation to the U.S. West dense (ar joessiganene,

Chymathed Bikand Acol) for San Francisco. 23 August - Topside sverage 1.33 8724 hours (Refer ence 7).

# USS Banner (APA-60)

21 Augus:	Beconvelopioned and co-velico K-sjeinin by ATA-192 for rediciogical costs.	28 August	Des combus fricaid
N August	Arrived as Eve/Alcon.	) OCLODES	Dipolde everage 5.27 8/24 bouts (Robri mole 4).
1 October	Popside average 0.21 k/26 cours (Refer- ence 7)		155 848104 (20 777)
	USS BARROM (APA 51) 114   Arriva'. IS May 1945   Degantury - 26 August 1945	fath (alath) Seat seit ( Seat seit)	760 1 Arrisali - 'o June 1946 1 Arraitaure - i0 August 1346 geather: 10 mm1 (19 km); (Ni Lecather: 10 mm1 (19 km), (Ni Stan ,erather: San Francisco
Crew Cocala Shu: JPIF i Shu! CAU[R i ScullIPC 1)	on de: Sho: AP ( <u>US)</u> Program (ADAL200) on de: Shoi Elled Devar Scalaen (1.515 yares (1.5 km) k Localaen (2.075 yares (1.9 km) k May 1948, regi Elegiateth Aicil	From Clean Task Official The Official Strugg	viegywr <u>Barion</u> was a suggesti Enfo In De- r Sivasion 41 TC I ( (Serface Poleus) II
Gor Trig Catelling	no Luccion nu Algest frankförf, was a falger vessul (ROOSHONDS, las siger vas reactared before For, st served ko Tiunsysteration Division tu i 2-6 (Rocchan) Type Jairy	889n: Toçtea	uned as it survey ship choosehous the opera- charactory spectral onergroupsic and costo ! equipment was installed. ! July, 00%1
Shok Adrif 1	t 2219, 0900)	1 Zuly	Signled various fices on whidewilled target ships when decomption.
36 June 1130	Crime musculated to <u>He</u> ver.	1027 1020 1048	Commenced takeng veneralinas. Rinosod Bakind Ansil Channell. Snarised Satisg venerasgeogistic secondisegs.
) avly 1539	the corresponding officer with a Golget move Sinc and Team A Described and scartes; the Cospection	:159 2 July	leir nam Bagesn for arma werse nat Lav arets.
1,000	The ship was declared free of reditional level of reditional levels	666: 2744	kauhored is bernn 367-e. Sikist éroll Changed an bainge to 251 A.
yluš k v.cl. 8	Search C and G and the remainder of the cross came that with Santa	a Bask Tistor	Species word instant 23 instructions of the potent op osciences: applies survey, paking and wares sum succes
1515	Terrisched an RM 2 accelane conderned by Decessions air group.	R 14 July	assis of the engravement of second begins
4 July 1420	Jertisched availer that plane.	14 July Sho: Raféé	Arturned to berth 147 m. Sikind Apoll. (24 July: DAlt)
1) (gly 08%	An F6X alterats was deliverent for stor BANKP	915. 915.	Conditionenty for general green subjected of the green
384444 : 24 IC(Y .340	Baltow was secutors and up; personnel were evaluated to Person	25 Juny 0541 1112	Regar the sistery burvey of the langoon. Departure the langoon for a reducte second station emotion the stati
25 July	<u>Nar</u> row sussaired heavy cablologenal con Samhnation The time remained abouts <u>Bey</u> ar with teensinged to ather units.	25 Jacy 0348	Anchored in berin 142. Bistoi Acole.
one pespect	is secured with an unknown date. There was ten up 2 August for 1 hour, encoding to en- report (Reference 2).	26-29 Joly 29 Joly 135 1453	Thek off-angle aphile sounding. Anchored. Shifted Berths
23 Augurs	Topolske uverwar C 19 8/24 houss (Soth) - enze Ch	50 Joyy	
26 Mirgues	Towed to Kwajalesh by US <u>S A</u> rtjonant (MRV- 145) too kadiological studiew ent obser vetton	i#31 Ju Juny	Undernesy to fuel, then shoroted in teals 14 De. Shotted to betth (416).
27 August	Actived at Key (algin	2 August	Shifted to spith a

289

USS Benevolence (AH-13)

10 August 1912 - Depented Bikant Atol: to rendervous with Destacyer Squadron <sup>1</sup> en route to Avari Harbor.

### USS DAVIELE [APA-33]

Crew Size: (28 Bisich Minil Archval – I June 1946 Bisich Minil Archval – I June 1946 Shoi Ablé Tocation, 25 mml (44 km) Xé Shoi WAKER Lucathon – 16 mml (28 km) thd Decontemination Bocation: Puge: Sound Operational Clearence: 7 December 1946 Final Clearence – 16 Teorwary 1947

- 14% Unit and Function <u>Boyfield</u>, an attack transport, was a support ship by transportation Daviation 30, mr 1.3.1 (transport Unit) its function was the evenuation and Deciling of pursonnel (rom sarget vessels.)
- Shot ABLE (1 Duly, 0900)
- 33 June 1521 Underway to evacuate carget vessel crews to stee outside of Lagoon with TS 1.3.
- : .ruly 174
- 174 Norbored in Serth 298
- 2 July Milfled to two the 255.
- Shot BAKIP (25 July, 0875)
- 24 July -
- (525) Underway wirt 70 1.3 wint persatuwi irom variatus tasget utigni for afea castsouthway of surface zero.
- 20 July 2625 Anchored in Netth 8, Atkint Atali and started discretarking teams and personnel of target ships.
- 10 July Shifted to beach 279.
- 2 August Shifted to beckb 378.
- } Mugusi .500 Depaired Sikini Stoli for Kwajairit. Acoli
- 4 Regula Arcived at Restalein.
- 8 August Departed Kwajalein for San Prancisco.

#### UPS BLOOP (470-12)

(rew Site 155 Bikhel Atoli Arrival: 5 June 1945 Bikhel Atoli Departure: 3 August 1945 Shot ABLE totasion 15 ami (20 km) ESE Shot BAREP lacation. 15 ami (20 km) SE, Area iranbiko Decontamination Location San Diego Operational Clearasce: 30 September 1945 Final Clearasce: 75 January 1947

Task Unit and Function <u>Begon</u> was a high-speed transport used as a support ship in TO [.k.3. (proce Mean point). Its (unotion was the support of drame heats that callected were samples ican the idgour after the deturn itons. UVP dromes were directed to desired sample areas to obtain water samples after an adequate tadget coated had been itonumitted to controlbers after the ebudion was completed dromes refurned to <u>Repor</u> where they were easied dromes refurned to <u>Repor</u> and boarded by a natery officer. When safe, Underwater Demolicing Teach 1 105-36 boat commission and transferred water samples.

- Shot ACLE I' Gu'y, DAOD]
- t Joly 0544
- Andersey or route to area Franklin. On station. Area Scanklin, muncuvering 0715 to keep on station. Related on a station off Hikini Atoli for 1015 droat boat operation. 113C Underway for assigned anchorage off fines Sland, Biksot. \$215 Anothered off Energy Island. Underway to berth 38, Bikini. 152B Anchored at Dikini atol, in berth 37 1010 Shol BAKER (25 July, 3835)
- 75 July
   0540 Underway to cearn station (Acea Franklink designated for SAREH day.
   0709 Arrived on station for MARME day.
   0840 Stearing to sextured station of Portulisiand, Richard.
   1054 Anchored in area off of new Island.

Two LCVP disones were monitored by boarding parties after detonation and were found very gadnowribwe. Muteu samples collected were left strend disones and recovered 2-1/27 hours later. Forly water samples (5 gallons [58.9 (liter) each) were collected an MADDR Day.

- 26 July 1612 Solfred to being JLa.
- 30 July Shifted to berth 37.
- 2 Jugard Shilled to both 0.

#### JSS BENEVOLENCE (AM-10)

(rew S'ge: 613 Bittas Agoli Brebal: 22 May 1946 Bittas Agoli Brebalt: 22 May 1946 Shet ABL: Jocation: 23 ami 139 km MR Shet BACIR Lecation: 46 ami 130 km MR Decolomitalish Lecation: 50 Francisco Operational Cleanance: 24 September 1946 Fingt Cleanance: April 1943

- Fash Unit and Function Benovotence was a hospital ship used as a support whip in TU 1.8.4 (Medical Unit).
- Shot ABLE [\* 36\*;, 8902]
- 30 June
  - (519) Underway For area Croham, preaming white TO 1.6.

l culy

1845 Archored in besth 268, Biking Anall.

2 July 1516	Anchored in period 145.	LT Muquusa 1310	Regan personnel discubation drom car-
Shot RAEiP (	25 July_ 0835)	-	det ships USE Decement (APA-61), USS Crit- nendon (APA-77), and USE Bareng (APA-50), and support ship VSS Userge Clyner (APA
24 Saly 1518	Underway for area Packard outside of las	L9 August	Shifted beaths.
30 July 0151	Anchored to berth 145, 2121ni Atoli	23 Radjan.e 2530	Constraining for Knajalako Atolik.
2 August	shifted to begin the	24 Negast	Rinned at Registein.
Т Алдаял	Shifted to berth 145.	29 Nagust	Departed Majaleta for San Selito, Call
ti August	Shifted to bench 240.		loroja, vja Veari maikke.
21 August	Departed for Pearl Karbor via Awajalein Acolt.		145 <u>41</u> 40 <u>(4</u> 444-61)
Bikini Atoli Shai Adli Lo Shai Adli Lo Deconiacina Operationa:	<u>uss Rear</u> (Afr-737)	Steint Aloit Crew Loratto Crew Ea(alto Shot ABLE Lo Shot BAELA : Decontament Operational Final Civera	118 1 Arrivai: Of May 1946 1 Departure: 20 August 1946 20 For Shot ABLE. U <u>SS Memilito (APA.451</u> 20 In Lor Shot ABLE. U <u>SS Memilito (APA.451</u> 20 In Shot BAKER: <u>Memilito (APA.451</u> 20 Shot BAKER: <u>Memilito (APA.451</u> 20 Statistico (AMA) 20 Light Shot Bakember 1946 20 December 1946, Motfold, Virginia
Fencilos and Bea <u>ar</u> , Transpo GeltJ,		ರುಕಟ್ಟಾ ಕಾರ್ಯ ಸು 95 ರಗ 7	a Function an arterk transport, was a target vessel (2008800k08, its creat was evacuated before bot, it starver in Transportation Division U   2.0 (Metricans Type Unit). July, 0900;
SMOR ABLE (1	July, 0900)	t July	
30 June 1530	Underway for area outside of tagger after embarking target vessel presence), steap-	1420 14]) 1730	Atk 192 lought a file aboard Bladen. Bl <u>ade</u> n cleasod for boarding.
צוטג נ	ing with TG 1.3.	2 July	The ship's crew reboarded Bladea.
401 آ پارل 7 1218	Anchored 5= beach 297. Bikini Aloil. Shiiked to seath 140	13 Jaly 0900	The commanding offices communiced a per- sonial and appre weeks inspection of the action
1900	Completed diservariing target ship per sonnel.	STOL BASER ;	25 Saly, 08351
j£ Jajy  }20-1420	7arget ship YOC-8) case alongside uo	24 July	Gree execusted to genrage.
Shal B <b>AKER</b> (	Cové B <u>ern</u> et. 25 July, 06.15)	25 July 2491 2230	Bladyn ciwared for boarding. Gerger readings chowed <u>Blad</u> eg at 0.0007
24 July			P//4 hours (Helecence 6, p. 17 B)
1126	Underway ofset embacking target vecsel perconnel for Area Kranziin, eleaming with TU J.1 3.	1225 1005 28 july	Medical research unit rebowed lest ann- Baik to USS C <u>onserve</u> r IRRS 390.
ענטן 10 4000	Anchored in Dwrith 278. Bikini Atoji	29 July	The doom columned abound ship-
2 August	Skitted to becch 351.	30 July	Shifted to beech 246.
յ հազադ։	Shifted to berth 255.	2 August	Shifted to berify 331
7 August	Shilled to betch 278.	i August	Shifted to besch 262.
- margalate		20 Angust	Departed (or Kawjalein Mo)).

# USS Bladen (APA-63)

## USS 8ount'ful (AH-9)

21 Noguest Arrived at KwnAslean. 26 Cuty 1552 Accepted to beying 597 unknow. CI NORTHER Redictovica, clearance Cound. JC Cally 10 Magaza Departed for Poarl darboy. 1002 Underway \$9; Post; Harbor with Knightap Atol 1. 31350, 2004, new USS 2040 ML(SH (465-10)) LSS BOTTIMEAU (494-735) USS BLUE MODE (AGC-2) Grow Stre 295 Elenni Aroli Allivali - Alune 1946 Blenni Atoli Debarturer - ID August 1945 Crew Sige, 504 Bisler Atol: Anning: 20 (gre 1945 Philinh Atol: Departure: 20 July 1945 Sho: 48.5 Locathor: 9 mmt (32 km) MAD Sho: BASER Locathor 13 mmt (19 km) SSE Shut Adde Location: 22 cml (25 cm) (AL Shut BAKEP Location: 20 cml (21 cm) Decorsenthallor Escution - Sam Francisco Opriational Creataine - 9 Recenter 1946 Decontraction to Altern Lts Angeles Exhall Clearance 27 December 1946 firs' l'earance By 22 Mc.ember 1946 Taxi unit and function Taxe usit and function Bouldingau, on stract frankport, was a support whip Dive Ridge, an amphibiods force flagship, Was a augport ship in 75 1.3 3 Robservers Gritt), its in framportation Division 72 of to 1.3.1 thrantport U(1)). Its function was to house catget was function was to carry observers for the operation nel come during the operation. and to provide compational scenes. Shish A8.5 41 2019, 09000 Sho: Abit (1 Duly: 5902) 30 Jane 10 June 1452 Underway for area outside of layout after indexway with TC (.3.) for stan outside 11559 emborated performed from target vehault. 18 0000 ¥101¥ 212 : Jaiy Issa Anchored to by:sh 200, Alking Acoli. auxnosed in Secul. 201, printer exercit. 2 Culy 1421. Shifted anchorage to beach 276. 2 July 3900 Childred to Section 21. Shet BAKEP (25 Duty, 00351 5 Gely 1.191 Chowway Io: Kwstaletr Acolt. 24 Galy 1350 Underway for area Marmon, outside of the lageon. steaming with fitulations one and two of To 1.3, b July 1005 Arejund or manjalets to detach poweral presengers 1508 Lett for Mature Atol 10 Cuty 0633 Anchosed in bersh 261, Aikiny Acoli. t Cody īня Shilled to berth 356 Archuted a: Majuro Anoll. 2 Apparts 8 July 1303 / Ruguan Shifted to besch 201. Separted for True Taland. TC August Arcived an Truk Islawi for a brinf stay. Departed Risimi Atuli for Pears Retbors 34 July ેમ્ટ્ર) 🖲 15 July USS BODAT(FJ. (An-9) \$621 Departed Trut Island for Gose. Urew Stor: 585 17 Joly Bikhhi Atali Arriva' 18 June 1966 .017 Arrived at Cuse. Bichni Atoli Jepärluit: 72 July 1945 Shes AELE Location: 73 nml (43 Jm) hE Shot BAKER Location 19 nml (33 Jm) ( Operational Lieärance 73 September 1946 Shoul Diearance 73 September 1946 B JODY 1906 Departed for Residues Atols. 23 JANEY ni M Anchored in Derth R-20, Recjulate Rtoll fask Unke and Function Shot 8441\* [25 July: 08351 pogniticity a hospital stdy, was a support ship be TUÎ 9.4 (Redinal Colt). 24 A.C.Y JÓAO Distance for Atking Model. Stol AB(\* (1 July, 0500) 75 July 30 3109 1741 Anchored in Deput 383, Mikhan Augli, 1442 Left the ragion for ervaloutside of the

stell, seealor with This h

## USS Bountiful (AH-9)

1 July 1657 Anchored in the Jaquan. Swa: BJCTP [25 July, UB35] 25 July 1510 Cofe Bikins Lagand for alea ourside the atolic stearing with TG 1.6. 27 July 1609 Departed Paking growt on court to Pearly Nacion. 4 Acquirt

1040 Moured at Pearl Harbor.

Septraded Decomptissioned at Seattle, Washington.

#### USS 800011308 1465-41

Crew Size 296 Biblini Atoli Arilval 5 Marin 2946 Biblini Atoli Separture: El September 1946 Sive ABLE Cocation. 20 mm (43 km; ht Sive BAKER Infarton: Rongelap Atoli Orcontamination BocAtion: San Branisso D Ogerazional Ciedrance. 20 November 1946 Findi (Vegrance: 20 November 1946

- Task Unkt and Function <u>Ap-ditrib</u> was a surveying ship used as a support why in TD | 4.5 Survey tratt. Detoce test Furearrival. <u>Howelitch</u> wate a survey of the endl and lagoon to prepare enclorage charts to be used to the uperation. Fnewersk and Songebap endls, were also surveyed its function during the operation was to survey the biological effects of the teston fact and which be. It also conducted or each graphic surveys to determine the character of our cents in and around the atol!.
- Shot 4818 (; July, BRCD)
- 10 Joure 1901: Undertway from Pongetap Aroll Cortarea. Packard
- i July Vale – Joiner TC I.E. 1941 – Anthropa Jo Densh 377. Bakani Anoja.
- 2 July Shifted to berrh 210.
- 12 July OB4: Reported a Fire on USS Composition<u>d Sound</u> av [21] O855 Exchangelaned Fire aboard Comborland Sound.
- 17 July 2016 Boderway. 1411 Anchored in Romanian Atoli
- SHOL BACK [25 July, 0835]
- 25 July Anchored at Rongelap Atell. I August 9558 Candurway Gos Bikin: Atoli where it an Chored in Decth 251.
- 2 Address Shifted to anglasing between Decits 385 and State.

- c 26 August Anoneyed at Biking, condeniing routine activities
- 27 September Departed Nikini Aculi for Prail Harbor via Respatein Aculi.

#### USS BRACKEN (APA-64)

(new Siger - 406 Fiking Aloli Aniges), Belone 30 June 1945 Biblel Aloli Criggionn, 17 August 1946 Crew Location for Shot AGLI: USS Meaning GAPA 451 Crew Location for Shot BAKIK, Marioes GAPA 451 Shot ABLE Location: 2,040 yards 11 S kml 5 Shot SAKR Location: 1,475 yards 11 S kml 55 Suck 10 March 1948, off Kwatalets Aloli

- Task Unit and Kimilton <u>Brocken</u> was an attack transport used as a larger vessel during CROSSECADS. Its crew was evaluated before MUE. It serves in transportation Elvision 93 of 70 1.2.6 (Reported Type Unit). Broken may equipped by the Electronics Group with Griger counters coupled to radio transmitters. In also carried water pressure internitiently choiceds to acamere internet clouds.
- Shol ABLE (1 July, 0900)
- 10 Jane
  - 1145 There officers and eighty-from milisted bars groupsted to Heptico. Last simula detail of two officers and ten entiried wen construct on Doord.
- July Pazalning Prackés com evacuated before ABLE.
  - DAD2 A fine was reported up together (Reference 5, p. 8-11)
  - 1463-1434 APA 197 alongside target ships <u>USS 41a</u> Gada (APA-875, USS <u>Bisdar</u> (APA 63), and Religher to (Sque (Sree Gaused by nuclear detonation (Reference 1, ATA-192),
    - 3412 USS Opencia (A+85) reported thre un <u>Pracker</u> (Reference 1, Openal). 3433 A7A 197 Started cooling down Bi<u>wkim</u>
    - John Marken net cartere coulding devel br<u>eger</u> Afference 5, L 2, M. JS15 Bracken net cartered tot boarding (Refer
    - 1575 Bracken not careated tot boarding (Rute) ence 6. 1 12-84.
    - 2542 Spectra reported a small (specific an aftern decktouse of Bracken (Reference ), Spectral

2 July Date April

- 0466-0854 (Seecilis; party from <u>Onesta</u> on <u>Bracken</u> (Reference L. O<u>n</u>vor<u>a</u>). O940 (Seecen) for basederig (Seference 5, p. R-565
- 3 July <u>Brockep</u> crew peruand beechang appard atop
- \$=01 BARLA (25 July, 6535)
- 25-26 July Ship abandoond before cest BAKER. Perpennel word abbetd USS Rockuridge (APA 228). H<u>encico, USS Appling</u> (ASR-58). and U<u>SS</u> (<u>Agration Hai</u>t LLSD 5).

27 July

D940 <u>Stacken</u> s≿kawad a 13⇔jrute injeraance. Ievet.

## USS Bracken (APA-64) 27 July

# <u>USEG Bramble</u> (MAGL-392)

1934-1926 	A boardong team boarded Blackon to to cover interuments after controls declated <u>Bracken</u> Geoger Sour (Retrievence 1- Cop server).	caused 2.C a caused by so Relow deck d	en the deck on vach sldv of the A2 hatch and 3.5 R/24 hords, which may have been aking up wasar used to wash off the deck here was an average radiation of 0.03 R/24
5022	<u>Reaction</u> reported Golger sour (Peterence 6. p. 1-21-81.	the two water	e where water had excerted the ship through a watches partly opened by the explosion
1450	All <u>Reachen</u> personnet on <u>Rockbeidge</u> were Gensferred to <u>Ben</u> s <u>ino</u> .	ing parties.	iours and poths leth open by advance board. The Alighent reading was about 1.5 R/24 eater on the main deck mean the 97 hold.
28 July 1140	Boulton boulded Bracken.	(Reference 2)	
1357	NMYS team boerded <u>Bracken</u> . All Anisale instruments, and teams were placed back on board <u>USA Converse</u> r (ARS) 30) IReference L. Co <u>nverse</u> l.	COPS COPS LOOD	Four set rebysided ship to easiet the radialogacyt pantion in collecting test equipment. Entp abandoned. All <u>Brackey</u> personnel on
31 July			Penalus Liandferred to Mockbridge.
0910°;C15 Jada-J645	(be <u>tersver</u> vashed daer B <u>recken</u> , Cogsoqyer aproyed foam on Brack <u>en (boter)</u> erve 1, <u>Conserver</u> ).	14 Jugaze	Topside overage C.T R/24 cours (Refer- verw 7).
t Regist	use Current (ARS 22) weared down Bracken; a bearding twat was aboard bracken for	15 August	Ship abondened: crew on Ro <u>ckbridg</u> e. Geneval and Gunaton Natil.
	L3 minutes (Reference L. <u>Carrent</u> ). After three hosings, Geager sour, 2 to 4 8/24 hours.	0900-3200	
3 August	Current washed down <u>Aporze</u> n: boorded <u>Brack</u> ed for 30 aboutos (Reference I.		doned with prerboard eachor housed.
6 Rugası	Duigent (.	ti lA Luques!	Rearboan demonstration to the termination of t
07.1	ATR-01 underway, operanting bracker.		7764 (411)
0838 (93)	ATR-ST washed down <u>Brocher</u> (Refrierry 1. ATR 57),	Alagana é: 0160	Your Branken commembers transferred to
1024 (356	<u>VSS Chickspar</u> (ATM 83) weshed down <u>Bracken</u> (Reference 5, Çhâ <u>ck</u> as <u>aw</u> ),		Chickenson for temporary duty to anthor Bracker, on Amajalein.
August		0106	Port bow chain out above waterline and
1021 2056	Sprayed with decontamination solution by Dispagation		taken into row by (h <u>irkasam</u> , Anchor de tabl on hoard 25 minutes.
1220 1304 1528	ATR 67 approached Breckers.		
1343	ATR-87 washed B <u>racken</u> down. ATR-87 moored portside to <u>Bracken</u> : radio- logical wasitet boarded Bracken.	21 հացատե	Anchored at Reajstein, Anchor detail was abcard 1 your and 5 minutes.
1632	Reviousgical control returned aboutd : Reviousgical control returned aboutd :	28 August	Erecken decompleStones.
6 Андина		10 September	Tupolde average 2.20 Pr24 nours (Refer- once 7).
1555-1620	OSM boarding them from <u>USA Deliver</u> (MAS 2)) on <u>Bracker</u> (Reference 1, <u>Deliver</u> ).		<u>usig srandli</u> (magi 192)
9 August	• • • • • • • • • • • • • • • • • • • •		-
1400	Ten <u>Bracker</u> : cronnengess were lightsforced to remarked target ship USS Gengea (AAA 80).	814441 Atel1 1916141 Atel2 Shot 4816 .or	Arriva' 6 Suly 1946 Begarture: 24 August 1946 Lathon: 1630 mml [1,167 km] 6
10 Nopust 0900-5130	Party reboarded ship to open it and make Interction for USM inspection party. By January due to Domby vapionism eacebt	Decontected	ocaelon: 2k mil (39 km) WSAr Ian Jacat'on: Pedri Nobbot Ian By 22 November 1946
	senses over to composite exploration except indicatogical containtation and displace ment of about a quarter of the upper deck heach boards Party departed ship. Jeaving DSH instrument salvage lear on board. Although the ship's log does not indicate when the 0000 bearding team de	vey Unit of the combine	d Junction second as a support ship in Td 1.8.5 (Soci- t) its function was to survey the effects nuclear tests on fish and wildlife and to occurrent surveys to determine the pr of the ocean currents around and inside
	parted. 11 is believed that they left later that day.	the ato	

The weather decks on 10 August showed considerable conremination after various eaches by tugs, rediating 0.4 to 0.5  $\pm/24$  bours, eacept in the ganvax and confequences the value gase to as much as 1.0  $\pm/24$  bours.

24 June - Lett Weatl Harbor for Keajalein Atoli.

Shot ABLE 4" Joly, 09001

# USS Bramble (WAGL-392)

# USS\_Briscoe (APA-65)

4 July 0836	herbuch at Kwajaluko Atobi.	3600 :610	Lest-simule personnel joined ship's com- pany os <u>Bayficid</u> . His Ruilaiser (Aug ti) proyected to in
ylut e Dlog	UnGerway for Bikini Atoli.		vestigate Brience and other target ships . Reference 1. Selpjeckt.
6 July 1217	Accived at Hiking Biolj and Anthored in bench 150.	5 2014 2 2014	Boarding team from <u>USS Clamp</u> (ARS-13) Dosrand B <u>riseos</u> for Inspection.
5701 BWFR 17	5 July. 6835f	0935 2417 0925	Viturfighting toom obgett Brigdon. Fire aboard Reference extinguished. Fireflighting party depended Brisdon.
24 July		2941	
2400	Departed Pikini Lagoon to posite with 70 1.6.7 in area Packard.	0948	Howeddard partsy Geparted Brigowy (Refer- ence 2, Class), Brigone reported Guiger weret lifetererke
25 July			6. p. J-25-k). Damage reported as nog
0895 8545	Changed sousce for Rongelep Bioli. Archourd at Rongelep Atosi.	1055	tigibie (Reference J. p. J). B <u>ringde (ram i Jeft Bayfieid)</u> Wicked up Geiger van en USS <u>-Hev</u> en (AH-
70 July			a?h.
\$192	Juderawy for Sikini Arni).	5155	Reboarding coam k. Geiger man, and clubs Sen technicians reboarded
9) Judy 0719	Anchored in North 250. Bikins Atoli.	1158 1245 1450	Comparing and opening ship. Technicians came shoard to read ordnance instruments.
7 August	Moved to an anonorage off of finew Island.	1335	Teas B reboarded.
e negane	or a contracting of a cred statement.	1409	Yeshnik lens came aboard to sold election
7 August	Returned to berth 250.	• • • •	365.
23 August		1505-1535	Second case aboaid to read inside the second s
23/0	a number trea 1935 Mayver (MH )2) came on board to measure any cadicatelybry on	1510	Technicians came aboats to read theirs
	coortness that were to be loaded,	1645	Term C. antiposited.
1330 1639	Loaded small boar monthings. Monissof left having Lighth on redioadliny but on monthing: the light then completed	£795-\$715	Technicians came aboard to sead instru- conts.
	Hy on moorings; the ship then completed - picking up moorings.	3 27 July	Rectributions periodically Doarded.
76			
26 August 1203	undersway tol Awajatein Atoli	C200-2:25	Siving party ebuard to protect underweigh: Instruments.
	<u>U\$5 BR1500</u> ( (ASA-65))	C015 1015	Diving party underwater Silving party underwater
Grea Shaer 1	12	14 Milly	
Bikint Alati Bikint Kicit Crew Localion	rc'heal, Setore 30 June 1946 Departuser: 20 August 1986 Aar Shal Abl€, USS Bagtheid (AP4 33) Tar Shut RAKER: ∯agtheid	C900-3115	Cluers working from an ICON os CACCSARDAX Instrumentation engaged in operations on the pastwick.
	#:!o>: 1.656 yards (1.5 \$#) €	15 July	
Shul BAREA Lo Sunk 6 May 19	calton: 970 pärdk (800 meterk) MSM 48. kvak Kvajaleik kyöt)	09:5	Buleau of Ships instrumentation Group began working on underwater blashing to test installed gauges.
418 Unit and			
noring ( Division	an altaik leanspeet, was a target vessel 19058/0005, it served in Transposation 93 in 10 1.2.6 Norchant Type Unity, its evaluated before shot ABLE (Bilgebe dat-	6 <del>8</del> 07 3017 30 July	Diving operations conducted in connection with gauge installation and cents.
was also	newaithers for the Electronics Group and equipped with water-pressure-telexetering to beeaute Johized cloods	2) July 0635	USS Actoriand (ASX-149) and ATM 87 along side to assist ship to deopping store
SMD: ANUE 43			anchor.
2003 MILL 14	-4-F. 41041	Shat BAKER  2	5 July, 0835)
10 Jane			•
6009	Come executived to <u>Beyfield</u> except for seven commercants and two civilians bett aboard as last clowle personnel.	24 (2014 0812-0945	Craw evaruated ship for Rayiteld with the exception of Six crememons and two civilians conducting last sinute details.
t July D405	Last-ploute pathonnel evacuated to USS <u>Seorge Clyper</u> (496-27).	25 July	tästinimule Getäll evotustvå to US <u>S</u> Ro <u>c</u> k <u>bridge</u> (APA-2281 prior to MAKER.

# <u>USS Briscoe</u> (APA-65) 25 July

# USS\_<u>0rule</u> (APA-66)

<b>33</b> Index			the susses of helpitete she continues
27 JOLY 1335 2449	Chartersonte potacrine, from Fridave de partes Rocabridge ta join the crow of Payticis.	1976-1910	the perpese of faisting the stationed suffer and sigging the stars andmar (7.5 (Sugged UNN-BC) alongside to take up the dustoit Holgoue tapolde sectoge 0.7 HADE boys INFFERENCE 7)
29 YUN 2952	Erisco- had a 30 timue tobecane .eve:	1665	Special boasting densel resulted to Pork- well.
1455-1520	(Reference 6, p. 1-10-8). Naval Sectori Recencen version (Ambi) New boarded Dikster to cerove (Ambi) Henry and antamis.	. C. Kogut (	come (cenerothery francjerred to (the) units
(",C	Briscow Geiger Boy: All workalt rolow ored Average Geiges readings on tain dets JD 8/24 Moury	19. <b>J</b> . 49050	Majority of remaining order tootsferged to remained target theo VSS Mijagaga CAPA F71
1402	Nil noltalis kristianents and 4009 per Vintek retarret to ogs fan <u>l</u> esog (Methole).	20 August june	Takén (n trav by July Dejimen (ANC 23) (nn
20 Jata 20 Jata 20 Jata	ACA-185 recovered anti-uments from Stite Get-		Gealaikin. A Soor ean eavier detait from Stignne notided Gelliner.
1. July Dai? DV12	util denovery (also the watted down Brits	NY TRANS	kophered at Keajalein. Sous man archo: Chiais celurned to Hiagaea.
(14571)	generation entered the second contracts generation entered of the second method in a second contracts large on Halledge.	siti tanj kanzasi	tipside waarage 0.40 M726 bears (Refea ware 75,
14) (	Conservation programs Conservation approximate and constraints of a constraint of the second se		USS 8404(C 14PA-66)
1 August	USS (U <u>rren)</u> UARS 27: Washed down aktogow. Desedient team on board to: 3 minutes. After a Jacker Postay, frjerige vill. Gebynt soor oper reafing (dre frame tob. upper deck, was 6 to 1 Page Board	Sigint Algi Tree coultion Cree Lonation Shot ABUL Loc	Altrival – delone 10 June 1966 Geogrifune, 26 August 1965 - For Shot Afrik, 206 Began (Anti Vin) - For Shot Battler, Besar after – 1.005 yanda (919 Antiers) St
A Bogget	Members (row (Apagot Scanded A <u>r</u> baige for 64 -Tosnes (roy an Cropertion /Reference 1. Custem <u>t</u> ).	Sunt 1: May 1 13:4 Entlare	izathon - UBV yènsk (stimetors) MH 1984 unas Kwagalet- Atuli :function gé adtatk tratégy:t, wak a tanget verset.
22.550 A 22.550 20.600	Transferred case and other to 000 Burbeatt (ARA-200)	during 1 stolet (	BOISHCADS, Fix crew way evendated for both is served in Prenaportation (balaber 9) of "Heachant Type Unit!.
0945 07:2 1060	ATA-130 Jankesany (n Britselje ATA-180 allonguiten Unitede (Neterleure ATA-180).	$S^{\mu}\psi^{\mu}=4B_{\mu}\psi^{\mu}=1/4$	(v.ly, 1305)
22 Augus: 6899	"introduction dolligent and inspection party of OSM personnet land is tremembers Searchd one ship for a survey of damage	90 0000 1200 2 0019 1042	All personnel evacuated in <u>Reary</u> . Bruie Capiared Geoger serves.
.[4]	and Malefiel consulton a comparison of any consultant Any malefiel consultant a supervise party percent of any semitted or board persons compared of these consultants	3518 3420	Tegine & and in period interacting to ship and took soundings. The ship was protoutied from of radio- activity.
tangast Lt 1001	Prus was Grantding party rawe on to take	وليد 6	Shifte of we had reposited.
105	draf; ati soundings with one period adminipanying the boarding party Roardang party left the ship.	10 Juny 1753	An F65 alleplate was prought or board.
it Aurus!		5000 BANIA (2	5 Ju <sup>r</sup> r, 08)5;
0750 0750	Comparison of Sines and 22-sam counting party sybcasted and Suppreted the ship is company with DSN representatives and	24 .taty 4025	All personnel were sponted sorar.
:122	(adva[e mon\tosa Reboarding and inspensing pasty resurced to <u>Myrima(1)</u> , moving operated emergency divovi€tice pumps	26 .:u)y	Systepred only other plystolic hamage (cut BANKA: but it received a consideration assuer of contological costamination.
16 жедсяк		29-00.Y	Radiological readings indicated no change in Scale's condition: It was assigned a
;201	Comparising officer with radiate position and R cross-spect pological prices by		reachail two restaluçasel tolerance

## <u>USS Brule</u> (APA-66) 29 July

jevel. Men<u>te</u> remainders relatived aboutd. Be<u>x</u>at.

- 12 August Recorded Degan Seing Leansletted from Scale to other enter.
- (3 Acquist Digube was thepected by a party from USE Whatton (RP 7) (Reference B). Giv to the Row readings the inspection was beint.
- 23 Request Tepside average 2.7 R/24 hours (Refm. once 7).
- 28 Rupost Personnel transfers completed. <u>Boule</u> de commissioned. Departed Bacani Aroli So: Kenjalein Acoli in Low by USS Chemannel (ATT+100).
- 29 August Arrived Kwajalein.
- 10 September: Topston Average 3.12 R/24 house (Refeaonce 1).

#### USS BURLISON LAPA 671

free Slor: 244 Bhoth' Aloli Atotval: 34 June 1546 Bhoth' Aloli Atotval: 3 Jugust 1946 Shot ABL: Location: Ippformately t1 5 Lo 15 AML (71 / to 28 kg) 351 Shot BAKin Location: 11.5 Ami 121 km; 155 Decontamination Location: Nortols, Singkois First Clearance: By 14 October 1946

Task Unit and function Burbeson, an estable transport, was a support ship in TD 1.1.2 (Instrumentation which, the function was to provide Taboratory and Dask factilities for the entrumentation Bett. It housed the test with sails used in the operation, providing entral pensteed bins, aucopsy coess, and pathology, behaviorosy, endobleloby and blochwister Taboraturies.

shot ABLE (1 July, D900)

ID JURE 1640 Underway for area curnide of the Bagcon be atua Craban. | Հայր | 2522 Ancoured in beach 33%. Bikini Accil. 1618 Anchored in Secth 315, A 12 Posts 10 sul 14 when defacted in narget 1640 ships <u>GSS Wingara</u> (APA-81). US<u>S</u> Carava (APA 85), and LCI 321 to repove submate from only the topsides of the ships. IR2C Roats required. 2 July 1211 Shidted to berch 107. 2 July 1.0 Loderway for Reajabein Aroll. 19 July 1638 Left for Bikint Mioli. 20 July 2011 Arithond BIRIAL MEDIAL

Shot RARIN (25 July, 0835)

24 July |648 tell Biktol Lagons for area Graham. 25 July 1253 Another of the boards Dealer, Mikhel Alarli, 26 July 1620 Repaired distriking plant clear of codim tion and ready for way. 28 Daty 1400 All evaporators were secured due to cabloantivity in the water. 1521 Ordered our of the ladoon to area Motoury to awain the relate of an UCVP with an anital the flexing party abound. Anital party reformed: <u>Burlyon</u> steamed out of Jacon. 1742 29 July 0905 Anchored in barth 083. yint De 1.25-2330 Conducted diving operations to release clashing caught in stationard contenset Tatake. 1211 Underway lot Kwajalein Apoll. DI JALY 1045 Anchored at Kwalaleba Mcoli. 3 August Departed for Bikin! Arabi IBL4 August. 0856 Aschered is beth D. Bikini Aloli - Persome) come on board for transfer to the Uniced States. 5 Popust Departed for Pearl Rather 1640

#### USS BUTTE (APA-68)

Crew Size: 126 SIRINI ALOIS AFRIVAL - 20 MAY 1946 Sikini Aloit Dreatinger. 78 Acquei 1946 Crew Location for Shot A0:1 - USS Bear FRPA-287,. USA Rochbridge (APA- 220) Crew Loration for Share Black. Becal, Rocking Kage Shol ABL: Location. 2,025 yards (19 km) Ma Shol SAK:P Location. 2,025 yards (2,2 km) Ma Summ 12 May 1948 year Fwagelein Aloll Task unit and Function Butte was an artuch transport used as a taket wastel during USGSRGADS. Its crew was evacuated for buth shows of USESSRATE. It served in Trans protection alloaston 92 of TO 1 2.6 (Recented Type) Um(P). \$501 ABLE (1 July, 0400); 30 June 0910-1015 Fost commembers were evacuated to Bezard a small contingent bearded Woostninger L Doly

3619 Putto empotions Golger owen: by reducter generations.

## <u>USS Butte</u> (APA-68) 1 July

- USS Carteret (APA-70)
- 2026 A flip was reported on brest (Refuterov 26 August 6. p. 2-14 A: Neteconce 5. p. D 140-
- 2 2414
- 1600 An indepention team reboarded Bytte-3615-3945 Preliminary damage inspection conducted.
- July 0845 — X13 Burge personnel sebearded.
- Shot 34409 (25 July, G835)
- 24 մանը 👘
  - 1020 Ship's tree was again evacuated in Read: Dast-Minute personnel boarded <u>Backbolinge</u>.
- 25 July 1000 Burge Geniared Gelger sour (Reference C. p. 1 12-8).
- Butte 6 crew remained about Bexas and Rockeridge Alter Annex.
- 31 July master jown by USS Cuprent (MRS-22) with high pressure streams theforence 5. p. 1 50 Bk.
- 3 August USS Clamp (AR9-13) seported Gelget team insperied ship: Gelget sourt.
- 1 August
- OB00-1700 Redwate monitor and bounding team interded. <u>Builty</u>: inspection canalts unknown.
- à 9 August Entire ship's company returned to Butte and conducted decontarination priceduces [ot approximately 6 hours each day, ceturning to Begar each tight for benching. Butte readings are given in Table A.L. Contaminated Liems were either washed with a high-pressure hose or strown overboard, Graphing of the Ship went below the waterline. Further decontarination ordered stopped by order of DSM.

Table A.1. USS Build (APA-68) decontamination.

...

Gate	Localhon	Reading 19724 Proj
7 Augusa	Mater See Average	0.2
	Average fale for	0.5
	Marleum LxLerior	1.5
	Average Interior	0.2%
	Wine Milderius	0.2
9 Acquil	Water The Average	0.09
	Average Fulerios	0.02
	Maximum Enterior	0.6
	Average Interior	0.65
	Marine Interfor	0.04
Z August	lops'de Average	U.12
1 October	Tops or Average	0.02

Sources: References 4 and 7

17-28 August Butte personnel transferred to various units of the task force. 75 Numperior Toward to Newsjeletz, and decomplicationed Butte remained at Newsjeletz for further radiological study uncil to east such

#### USS CABLESLE (APA.59)

Crea Start 104 Stitut Atali Arrival Before 30 June (S46 Crea Location for Shot ASL: US<u>S Bewar</u> (UPA-737) Crea Location for Shot Batta, Vertour Unity Shot A.B.S Cocation: ASO yards (4\* meters) SM Such J.July 1945, Richt Atal?

- Task Unkl and Function Carligge, an allock transpose, was a target vessel during CROSSROADS. Its crew was evacuated before APLE and common companying to the ship. It proved in Transportation Division 92 of TU 1.2.5 (Merchant Type Unit).
- Shot #818 41 2417, 09001

<u>Conjigle</u> mank due to that ARLE damage. Diving operations were conducted for examination of the ship effer shot NEAE ontil about 14 July-

Shat #4K!# [25 July, 0835]

By 25 July <u>Carliable's (The Red Even transferred</u> to various units of the filest for the sensitive of CROSS SOADS. The units included USU <u>Cours</u>, (ASD-49), <u>USS Grea</u> (AVP-49), <u>USS</u> (1-2,6, CTV 1.2,7, ComService Eleven, and CTU 1.2,5.

#### USS CAPTERET (APA-TO)

Crew Shire: 119

Brkini Atoli Arrival: Bokove B Jone 1996 Brkini Atoli Departure: 25 August 1946 Grew Location for Shot ANLE – ITSS Bergy (APA-297) Grew Location for shot BAKER – Bergy Stot ARRI Location – Build pards [].6 km/ St Stot BAFER Location: - 22,403 yards (2.2 km; MSm Such BAFER Location: - 22,403 yards (2.2 km; MSm

Tesk Unit and Function <u>Casedier</u> was an according enough as a cargovescel during reconstruing. Its clow was evaluated before each shot. It served in flampoliation DL vision B1 of full.2.6 (Meechars Type Unit).

Sho1 All F (1 Joly, 0900)

30 June 0930 1214	Commonded ovariating whip: Commanding officer evacuated ships ship completely evacuated to Becat.
7 Joly	
ÍDLL	A boarding team tice USS Clamp (MRS-93) Download Carlotot.
1012	Fire party from Class boarded Carteret alter report of a fire.
1020	Esce aboard Carteries existingul-Wed.
:050	Pestina electric de <u>rterne</u> referred to <u>Clamp</u> (Peterence L. Slamp).
1058	Cattatet declared Gatgat seemt (Raference 6. 7 28 A).
1490	Commanding office: coursed accompanied by codiologist and team & of ship's crew to make pretiminary investigation of the entire ship
14L0	Team 3 teboarded.

#### USS Carteret (APA-70) 2 July

3430	Nochologist depected. Neving reported Cartenet to be free of redicectivity	I
3927	Abl hands returned to Carseret.	
6 July		2 Augur
ò54)	Gagerway to shift berrhs.	1945
0621	Anchored between berths 185 and 297.	
2055	YU 63 monend to stationerd.	
1910-1125	Took on fuel from 10-63.	1
Shat 944EA (2	5 July, 0835)	
24 July		
0915	Commenced evacuating personnel to <u>Rega</u> r.	
1034	Companding office; [0]: Correcot: com-	
	pleted evacuating the ship-	
25 July		
1404	LSS Suncrick (Ad-80) was advised that Cat-	The fi
	toret was clear for buarding and directed	1.2 97
	to place a team aboard	1.2 8/
1420	The water around Cartesiet Was Guiger and	[set see
••••	15 8/24 hours: Schoolk awaited further	hours.
	Instructions	100110
1621	Suncock directed to proneed time Carreget	12.4021
	to special anchorage (perference 1, cyn-	3-21 M
	socal.	
27 July		
1211-1224	TRA CONSErver (ARS-191 certive:ed instru-	
	ments trus Garlerel (Swimmonre L. Con-	
	SPEVER).	
1.225	shap reported Gabger court and it was	
	not cleased for boarding (Reference 6.	
	p. 1-22-B1.	[] Juogi
1230	Corteret Gatges Dour. Team not placed	U
	aboard: Gelger reading 0.25 P at 8 font	· ·
	12 44-meters distance. Two instruments	
	hanging over stern recovered.	
	hanging over steen recoverve.	Je Aug
29 Joly		0905
2430	Configure declared Celigar stur (5 P/74	4707
2122	heats).	
1450	Carters; approved for reboarding for a	16 Lug
	limited time: ponition present so quard	. Ö
	against exceeding tolerance.	

VSS\_Outrent INRS-22) moored alongside Carterel for s5 minutes hearding team anoard for 15 minutes theforence 

34 July

101	USS <u>Preserv</u> er (ARS-8) underway to <u>Car</u> -
	teret to take Gelgor scedings and spray
	witch form
1537	Preserver completed taking Guiger read
	ings: commenced spraying Carteret with
	powdered chesical foam.
1255	Preserver completed spraying Carteset
	termined, termineter sheatend outcorfe

IReference 1. Preserver1.

2 Aucust D7#2 Preserver statetery to wash down Casteret in larget acrey. Preserver washed down Catteret with two 0810 3004 5 instrumented monitors. 1017-1027 Preserver monitor team on board Carteret to take Geoger coachings (Reference L. Pearane wave ( 1054-1105 Recipical conttor from Class boarded Carteres (Reference 1. Class).

Neerage fadlos.thesey aboard Degrees ns. 0.14 8/24 hourst boarding years tetuceed to Class.

The capitaln and working party with a radiologist boarded to conduct decontan--1045 Institut operations; returned to Manary 120 Deconsumination crew boarded Carteret after postructions on rarget ship L85 Muglott (00 389) The survey by the Geoger men indicated root the ship was clear below deck. Diesel generators were started and the Doller Hir off. Deconenvironation work was carried out on the weather dick and upper dock throughout the day (Reference 4)

inel Celger cendings that day were: upper deck 24 hours, cabin Gerk U 15 9/24 hours, pocydect 24 hours, hridge Gerk 0.3 9/24 hours, careala r 6140ks 6-2 9/24 Nower, might: 0rldge 0.5 8/24 forecasile 1.2 R/76 Norrs, Two montrois were ed all day without reliet (Reference 4)

62337 Recentarian work continued. working pactives generally boarded at 0745, te turning to Sexar about 1630. A radiolo gist accompanied the terms each day. Prob A August to 1009 on 11 August, the data monoting officer and a steleton crew ut engineers revained aboard ar night to operate the ship's poplets.

440 910

Capitain, accompanied by the radiologist. returned to ship to obtain choosemeters. Capitain and radiologist left the ship.

1200 Capitain and working party boarded ship. with fudiologist to receive paint storps.

.3t é tô Capiein bearded ship with radiclogist and watched party to rig ship for painting. Capiain and working party resurned to 1610 Bezar.

- 17 August
  - Captern Doerded ship with testininglet De 10 and working party and compensed painting outer deck and sepwestructure. 1730 Ceptain and working party returned to Sezer -

18 Junet 0814-1715 Ceptato, crew, and cadbologist or board to complete pathsing.

19 August Decembershow operations were provided discontinued, and the crew was trans-terred to USS Ge<u>orge C</u>lymor (APR-77).

Crew cronsferred to other ships, captein 20 August and one party officer continued to live on Beret.

25 AUGUST use Chowanos (ASP-100) prepared Calleset for towing: Chowange departed for Ewaja late with Carrenal in row.

Ship decomissioned. 26 Acoust

## USS Carteret (APA-70)

### USS Catron (APA-71)

27 August	( <u>2006), dest</u> Free	acciumi ac	Kasa ja te t	n: casr oti	toflaence on ecce 3).	t he
Table A.2 Its	ts the Ge	iges (wadle	nga tahut	nboard <u>Par</u>	Shud SAKEP (.	n 15
teret					24 July	
latie (	.7. 935 <u>(</u> ) ryad1'	ar <u>sere</u> s (Al 'nys		lation	10.10	100.0
		-		-	27 July CO44	Cat
		Reaking (B	2/24 Auces	: 		170 1-2
		Averaja		A.er age	28 JULY	
Jate	'opy'de	fops 44 M	le vi de	[aside	1429-1436	Hali Ute
-						
J August 4 August		6.8 2 b	2 <b>4</b> 3 8	0 / . a	29 July 1384 (357	int.
1 Rugi 4"	ič	\$3	3 ž			
5 August	0.9	0.4	<b>?</b>	2 0e	2 August	_ Ci <u>a</u>
7 Kugust 8 Kugust	C. 15 C. 45	C () C ()3	5.6	0.06		C 45
9 August	0.45	0.244	3.6	0.0e	(2 A0GUS)	
C August	0.6	0.69 <b>6</b>	0.6	3.04		3 г. к
b' August	П.¢	0.598	0.e	2.04		<b>.</b>
20 August 29 Septemb	·	0.' 4.044			() August	Dos reci
	•					100
Note.					(4 Xagust	- A1: .04
4 - 519m	1'let no ri	Adding 446	136'e			cit
_						1.54
506FC#V.	8976147195	4 201 1.				584 50%
-						ot.
	<b>1.55 F</b>				14. 1.10. 44	24.5
	473 Pi	<u>at</u> ron <sub>i</sub> [apa:			LG MUQUAR	21 ( 5724)
Erem Stre - 1						
Bleant Als"						10
Dikini Ato'' Tree Location	Cepariture: Por Sent	20 44 gust 27 11 45	( 1946 Kendler :	JPL. (5)	15 Jugard	Sev
(rew to-41"an	tor Shol	ALEFA Vier	10.65	,		<b>=</b> ,-
Shel AB14 Loc	ation: 1,1	846 yarde 1	i Den S			504
Shet BAK!# Lo Suffe 6 May						105
		(4419)05114			(9 August	Ajre
		-			-	5 r. ŋ
Tack bolt and				OFANT VESSON		նու ԿՄ.Գ
				acusted for		
Soll who	da. jt se	synt In To	ansporter.	han Division	20 August	Tes
93 of TV	1.7.5 (#	асына Тур	F 100 ° (.			7006
Shot ABLI (*	July, 2903					рча 15
	•					_
30 June 1015		evacuated in	o Hartra		2) August	Teo hou
1010				•		-t ;
t July						7kių
1530		clared Sel iRoScrence		ty 288 glanp – ≥∙∎t		סוול
	10001 424	160.0170.0	5. p. 1-1		22 August	€1×
2 July						hou
1345				d for board	JA American	<b>H</b> -
	boarded.	- <b>-</b>	V- 4-161	1. 77 <b>0</b> 0 70	Ye Rodard	<b>-</b>
					26 Jung-St	A
An it July of					* • •	<b>D</b>
Then the design above the					29 Magunt	0ec

spears the thip were exposed. there was no test

ship a movement from the tens (Refer J'4. DB251 er evacuated to Position. tres showed a little calerance leve; on 10 feel (9 persits: thefelence 5, p. 20 B). It the tost unitally were recoved while e solo was withit testore agontabolog test animals were respond <u>ero</u> administrated a cost of hose ro <u>stor</u> (Reference 5, p. 2-71 R). which bearsed for 1 hours to open and spect ship. erding twam bearded for 45 winners to cover casuality badges. Grew transforred an alway too to USS Mockinghes (APA-279). Constantions who were in endoarding and an <u>Cat</u>ron were mognized, with their trifted. For radioactivity by radiologic al monitors. No personnel stawed any dicentivery, fro shows of two week mend radioactivity and week disposed Steen were bounded and 4 hours an are enting so just out english cover wight n posided for Likitier in the strength continue pumping out the origine room. set box bearded. For 1-1/2 hours in the rates to pape but angine toom. Non-men arded an the afternoon for a 7-hour spection. ne mes boarder (or : hout in the more I to conduct pumping operatives, pumpg construed for 7 bours 45 structures in atternoom. ulve men boarded for 2 hours in the ering to conduct pumping operations: aping operations continued for 2 hours minutes in the effermuon.

n p**r⊶men boarded in the mosning for** 2 urs 30 minutes to conduct pumping aper-loss, wix ten boarded for aimost 1 ura to the attention to continue pump ٩.

even Created purpled the ship for 2 urs 20 etmates.

ry to Meslatein Atol:

- elved at maajaleis.
- comits stored -

USS Charles P. Cecil (00-835)

Average topside intensities measured aboatd Catson white at leared below (Reference 'D):

%29 _	Reading (kv24 ho≑ts)
3 August	6.0
& AUTURA	40
B August	2.5
12 August	1.5
22 August	387
Vb September	0.15

#### USS LEBL CARG-61

Cone State 357 Bikhal Alali Arrival: 20 May 1945 Swinn Aloll Departure - 23 August 1946 Location for Shot ABLE - Resjanets Aloll larythan 1c- Shot BAKER - 19 Mel (35 km) 1 Me Decontemination Epiation - San Francisco Uperstional Liteacance: 16 Secomber 1941 Float Clearance. 21 Secenber VIEL

Task Units and Function Geba was an arghibious teady group repair ship upod as a cupport ship in TO [.6.] (Repair and Service Unit). Its functions were salvaging, tow ing. and emergency repair work.

Shet ABLE (1 July, 0366)

- I July 1151 Underway for Aiking Atoly from Keejelvin. Z July
- <u>ā</u>913 Anchored in besch 251 A. Bikini Apoll. Amifemi to bereb 207 A. 1419
- IB July
  - 1400 retr for kongejap Atolb
- 9 July
- diat. Arcived at Rongelap Aloli. CLBD requested for Rheint Aroll, completing spensters to <u>WiS Rouditch</u> (AGS 4) before Leaving Archaired in beach 297 A. bikant Acoll. 1642
- AL Suly.
  - 0940 PCM-32 came alongside to: repairs. 1049 SUM-20 came asongside los repairs.
- 22 July 040C ful-31 came alongside for repairs. A diving party left to rate underwater, repairs on USS Green (ASI-11). 0850 1610 intuing party concenned.
- 73 July 1512 A) I FARE had cast off.
- SAOR BARE: (25 July, 0005)

24 July

- 1349 Departed Lagnon for area Packerd. 25 July
- 0835 Operating in area Ctabas. 0949 veft Lot Rongelap Atols.
  - 1001 Archosed as Rongelap Acoll.

Anchosed in beach 2078. Bikind Atoll. ) 400-51 0908 YES \$1) came Alongside for repolits. VNS-354 case alangaide for repairs. 0925 2 August 1304 Underway for bergh Roger. reat. Anchored. 7 Auguse 0920 Anchored in preliminary bench 207 A. EC 2) Langet Target shap bOliL0 549, which had been radiologically cleared after shors ABLE and MAKER, alongside for repairs. 16 August 0900 Persiters came aboard to chuck evaporatorg, fiveporator working spaces reported clear of radioactivity and tafe for personnel. 22 RUGHOL No radiological ensores found except for the auxiliary condenser of the evenora-tors. In was, however, sale to aperate under standard watch conditions. A fourman Hadbological Safety Cleasance Hoard two name abraid to inspect the ship. Si August

processary for Biktol Atoll.

- Departed Rikini Aloii for Residein Atoli I CINU and thency to learl karbor.
- 10 September Arrived at Fearl Marbor.

95 July 6034

1500

13 September: A reducto representative likeoed a condi-Congal codialogical clearance for <u>Debu</u> and secomended sinking two 36-fect (11meter) motor launches and an LOVP that were considered unsafe. It was further recommission that namels, a boat weight, and a port gangway immder be punks that men working on the scarmoard and so coain weat gloves; and that all soltwater sys tes lines be opened or weided only under radiological monitoring supervision. The radiate conconcretet lists, were foblicated.

14 September Left for Ban Diego.

#### USS CHARLES P. CECH, 160 8351

Come Street 287 Piksel Alol! #r-lyal: # june 1946 Bikini Atuli Ceparture. 75 July 1946 Shot ABLE Cocation: 42 mm1 (76 km) fst Shot BAKET (acation: Approximate), 40 mm1 (85 km) 55 Final Ciedrance By 22 November 1946 Task Onit and Fencines The destroyed decity was a support ship in De-Attophy Hivision 5. Commander Destroyed Sevenites 5. of TG 1.6 (Newy Air Group). Its function was to provide support for the drone and photographic alteraf: operations Shel 4816 (1 July, 0300) 30 Juan

1612 Underwry for operasing area.

# USS Charles P. Cecil (00-835)

# USS Chickasaw (ATF-83)

1.0049		3 201 <del>4</del>	
1561	Anchored as Responsible Asc'l.	900	Picked up reducinginal monitors from USS Haven, Unit 171.
2 July		1104 .201	Mintquide farget while QSS independence
3605	Leit for Bacini Atol.	81738	<ul> <li>(CVL-22) to collect pressure instruments</li> <li>Completed assisting ATR-LPD in rowing</li> </ul>
a daily			tride <u>pendet</u> o, el.
QA2;; CB:6	Accived Biblek Ato): Concernent of Acto Mill & A	:809	Anthored mean beach 307, Bikini Accil
0945	Contervery to join TC 1.6.2. Amenored in Delta 249.	Տ մեմγ	
36:5		0022 > 1014	Defend to conclusion when the stands of fade
10.5	Depailed for Kwajalein.	00	Didened to stay in the vicinity of Ender gendence.
4 Guly		3953	Anchored in berch 292.
2654	Ambored at Reajatesh Acolt, conducted		
	almorate recking row, fighter direction	7 2419	
	exercises, and bassie execcises.	0844-1137	Assisted shifting target ship 255 Denser
		1403	(APR-79) to trea britte. Andharad in harsh 289.
;) <i>D</i> u(y	Left Peepalein Atol: for operating acco	1405	NUMERAL AND DESCRIPTIONS
11 6414	to conduct filter operations in cospany	< July	
	with USS Shangel-La HW-387 and USS	0714-1405	Towed Independence to berits 214.
	fairer (07 406).	107	Auchored in Swith 15.
L4 July		D. Jolly	
1124	Apphosed as Biking Apoli in beach 243.	1940 .278	Towed Larget ship 555 Artansas (R) 11:
			to beach this
15 July		13.4	No franci in berth ().
1635	Onderway for Westalvin Acol after trans-		
	derving personnel from 058 Chickesser (Atried).	11 July 1251 John	would be that the same bounds and late the
	(ATF (C)).	121: .001	Traved target sldg (R <u>ES beyado</u> 4000.361 to (1% percention to the target array,
(b July		1253	Anchored in uniformisized because Biking.
19.6	All 1900 Res ja. etc. Atoli.	1.22	ener verschift einzerninge sind berecht als issernist.
	,	12 July	
SEC: BARCO	1 (25 July, 0605)	C650-1100	Towed "arget ship USS Saratoge (CV-3) to
			its new poering.
24 July		1.45	Anthorned in Berth 75
1P1C	Underway with 75 r.C for arms outside of		
	BENING Legsón	is Ja≱γ ata ana	Transference of the USA Patha and an USA 121
25 July		2409-1975	Towerd tabage: ship USS Colteworden (AFR 77) to new besch.
1722	Ancipated at Kentlatation Models.	, 545	Ancho;ed in Secto 15,
	••••••	-	
28 JJ:Y		15 3047	
:640	Owparted for Pearl Report.	0635-0829	Treed Sateloge to assigned modiling buoy.
		1450-1758	Toward carget while <u>ySS_Reysant</u> (\$3-402). to new beath
	LSS CHICKASAM (ACT-H3)	1822	Anctored in besch 75.
(new Stree	76	LE July	
	11 Arriva1: 31 Pay 1946	1056-0304	Towed ABA 165 st new Swren.
	ol' Gebanturen 26 August 1945		
	Location Approximately 24 wai (44 wai) (	STOL BRACK (	25 July, 2005)
	ilisca)son – 12 mai (22 ma) Si Hation Localion: San Arancisku	26 1	
	14 Clan Cocalisan: San Arancikko 19 Cimaranre - 13 January 1941	91.01 PS 26 July 26 J	Underway to: area outside of langoon with
	Parce 18 January 1921	10.12	40 1.2.7.
Net 0511	and Function	25 July	
	liebt ocean nug Styckasay was a support ship	1116	Reent cred Cagoon
	2 1.2.1 (Selvege Polt) for functions were	1141	Anchored in perch 0,
	wing, firefighting, towing, and emergency	74 5.11	
e opa s	te watati	28 July \$248 3649	Purchase and the set the set to be a low to the set
Shall BRIS	(* Suta, C903)	Filen 104A	- Cederway (Cerino, Corpet Datemarine ( <u>1921</u> Type) (SS-203) no let side at Rochikata)
JIGE -DEE			sided.
J July		(125	Apphoted news becth 178.
0528	Underway for operating area for shor		
	ADLE	29 20(Y	
: 365	Envered Bikini Karbor in Icruation	2925	Underway to spray loam on cauget ship 053
: 150		00.41 10.22	fughes (SD 410).
1425		0946-1829	Anchored in vicially of Hughes Anchored in uniders find insch in Dikini
:015	ships: awaiting redicloyital civarance. Anthored in borth F. Sikini Atoli.	1932	Anothered in unidentified beach in Bikini.
1012	we'shide he balled at Distan width:		

# USS\_Chickasaw (ATF-83)

# USS Chikaskia (AD-54)

30 July		28 August	
5,128	taxdetway for Pongelap Atoll.	1239	Anchored <u>Caling</u> an Anajadein, then pro- ceeded to anchorage.
21 Ju29 2858 8319	AncAosod Rongelap Acult Underway to Pikini Acolt with LCT-1420 and LCT J105 in the	)  August 1423-1629	Mooked <u>Criteraten</u> ia <u>Davio</u> n.
		) September	Departed meajabein too Guam.
i Nugust Og29	Anchoged as Biblini Acoli in beach H. efree caseing off both 2018.		uss_chirașrea (ad-54)
2 August	Shafted to anchorage omer onthe 178.	Erew Size Ristri Asobi	176 Arrival: Before I July 1946
5 August			Departure: 21 August 1946
1447-1558	Mashed down target ship uss casconade		cation 28 rel 152 km   k
:649	TAPA 85). Anchesed near besth 336.		osation Kwatatetn Atolik tot Location San Francissu
s hours		Operational	Clearance 31 December 1946 N.e. 4 January 1947
0912-1012	Sprayed Gaseenade with a special solu		
	:Lon.	Take lines and	a Funclion
1624 1056	Mashed down rangel ship USS Beached (APA		Sa, an oller, wax a support ship in Te
1510	64), then got underway. Anothered rever berth 1/8.	1.8.) 1 te pass support	Repair and Service Unart, its Junction was the provisions, Eucl. and water, to order white:
7 Requist			
1023-1056	Sprøyed Bracken with decontamination solution, them gol underway	Shor AULE ::	
2377	Anchored in beach 75.	A 1014	Steasting to column with seven other white:
8 August		1835	Anchosed in besth 324.
1 100- 1 462	Liftwit three boxes tree carget ship 1995. LST-545 to LCM-26.	B. F	
1438	Ancha:ed in Secth 75.	6 July 0948-3340	Refueled target ship <u>the securop</u> e KN-39,
9 August		10 July	
101-0190	Mached down carges ship US <u>S</u> Biole (APA 66).	0710-1155	Retwelve Fanges Ship VSS Persosytvaria 198: Jail
3027	Washed down pawson.	1637	Anchored next to target ship \$55 Nevern
\$159	Nuchesed to becch 53.		(DB 16). Remained enchanged many to Heyada overnight.
13 August [119-1427	kasped down (arge: subjearine L <u>SS Par≺b</u> e	եւ Յոլա	
1119 141	(\$5-384).	0152	Underway Etty Neusda.
1525-1628	Mashed doen targer subwarboe <u>itss Store</u>		
	(98-305).	14 July	
115:	Mechated in beach 54.	0739-1050 1 Tea	Forted carger ship USS <u>A</u> ckensas (HB 13). An Normal in Brock 267
1910L 010L	Underway to kwejalein Aroli with Bracken in Low-	21 July	Departed for Awajalein
		22 July	Anchospé as Peajalein to replenish fueb
21 Requise			supply.
2704	Anchored Bracken at Keepelein. Verbreway to Hikins.	Shes BANER (	25 July, 8635;
22 August		25 July	
1045	Recorded to hereb 51. Healed Arish).	0952	Departed swajalein for Pongelap.
23 August		20 July	
1059	Departed for Resident Atoli with carper ship USS Sair Lake City (CA-25) IP (me.	0825	Anchored at Rongelap.
		30 July	••••••••••••••••••••••••••••••••••••••
25 Nuquat 1155	Anchored Soll Lake City et Kwejajeja	1040	Departed Rengelog for Bikini efter re- fueling ships
	ALCOLL. ALCOLL	1735	Anchored in Decon 250, Mikini.
1017	Left for Alkins ALOSI.		
		2 August	Notice the base of the second
20 Norpola 1102	Anchored Biking Acoll.	1056	Underway to discharge contaminated oil: melleved to be contaminated table foreign
1257	UnArrany for Knajalate Atop) with target		material, not tree radiation.
	stay (55 Cotron (APA-71) in tor.		

# <u>USS Chikaskia</u> (AD-83) 2 August

# USS Chowanoc (ATF-100)

1832	Northeard CDD yards (SCD methods) coultained of Domy (D).	(t.July 09(2),226	Unloaded Arty gear true Larger ship USS
3 Progent	teli Mikini dua Kenjaleta ufaer en(geljarg. Sõips	1800	Proving Logit and UNU 18: concern and VF to Store . Concerned to assist using and VF to Store . Concerned to assist using angle terms of the which was to the other protiegant of the
б Андан)	Abi Noriet (Afi Kesijale) u		lagoon Society 72 Safequard.
5 .2 Мыдызс	Refuented and verviced school at Kealstello	et sug	na doofe in deadeanaachaile Selegara.
(1 August	Departure Antegratero fere (Distor	it July	Towed Safequard to Snewclak Atoli
14 August	securical and analogical at ethics, beach 205	16 July	Rebeated Saleguard and departed for Bitton A(c);
20 Jungness 2050 1040 2050-1500	Fueled targes pesual LCC 1.15. Radsute petry inspected ship, and tracé tree of judipactivity.	.7 Coly 1834	Montoured At (Comput Atro), Mark elemented target ship (SS Independence (CVI-122) for about 5 minutes to most ne bestile its
2) 007051	Underwoy lov swajateón.		Record to Contract Stills (1955) Ackennie: (20) No. 10: - none de unided congel
24 August	Administration of the second s	ls Joly	Avonyable (schegescharte für 10 minutes)
2 September	Astioned at Dear, Harbeit,	21 .044y 0834	Departed for Pargelap Stol: with 25,000 to tow.
Leev Skre		1952 2142	Recred at Rempelap Atoll. Departed for Hickler Atoll alfee searcing YP 555 to 102 <u>Operat</u> (1X (55).
BIRANI ALDI'	Arrikalı 78 May 1946 Ceparturer və August 1946 Cattor Məlemi (114 Am) XSI	SHEL BURGE IN	AS 20 (Y. 0835)
Smaa Bakik I Decontoeffaat	coatfor (Eines):00 kar  550 kom fouldlow (Fear) metodat scen ( February 1942	20 July 67 28 (MO	Anthoned at Pikini Atoli. Underway for area cutside of Jayoon.
te Tiri Tikons w	i Funktion Mot opean turg Commange was a support ship LeB C (Regeatr and Socolow Anton, iss Supri- mene subweging (Cowing, and Gilloeding sep companyeer):	25 Yoly 2005 (SNG 26 30 July	Chatget colese for Kontelep Angrared at Kongelup Itali At Sompolate Foutine activities.
Shok Alka (*		)C July	(e): Pongelaj- Aloji
10 June 1932	anderway for Kwajsiet, whoil with monit in fow	1; 2017 0995 1212	Associated in Berth 201, Mikins Anoly. Stifted no boost 1916
Usiy Usiy	Pewersed course and headed back to Bikini Atali.	( ) Agginti;	Silectably party attempted to recover revolding equipment from Nam and Froit talanda, Saviet Arall.
2 July		1 Augus) (606	Anchored in Doubh 964.
2355 3841 6548	Auchored on beren 41 Bistol Areli. Cest off Mor(02 and underway 40 GBS_(Mor digot IRGS-66 to discharge passengers Underway for Kesjalvin atoli.	6 Aca.st	Mashwi dawa tangat ship 135 Palph Talbon 195-193: tar about 6-172 hautsi
) July 1872	Actived at Kwajsivin. Cefr tur Əikirs Atrij wiss yfeibe in sew.	Т жүдон)	Machine them to get while $552$ . Relad 100 4041 for 2 house Masted form target submation $552$ scarsiver (22, 345) for 1 house.
4 Jaiy :279	Antifored wear perch JM(A in IGMan) Acoll.	8-9 <b>M</b> uguna	Poutime activities.
5-9 JUCY	Howard over 1865, <u>Stong</u> (APP 75: and 199) Celas (NWG 6: Toe supplies	(C. Kayas)	*
ic buly	Anchored to Serrb 1914.	11 32 August	Postike activities.

- klongslibe ranger ships toos willson that Le august 4081 (2 L/2 tourse), USS Trippe (SD 4031 (2 Rourse), and (<u>SS</u> Mayranz (DD 492) (1 hour, 50 pointes) to intrieve terredome.
  - all cospedoes were placed on CCI 1136.
- Alendation (Argen soly <u>Mills</u> Ken York (BR-)4) for 20 binktes in sconster torpodium 15 August 30 KCT 1215.
- to is August. Regime activities
- Miningshide torget whip they permayinghida (Ma-38) for 4 hours, 20 minutes, assist-ing is swimplag in the resource (which in 20 MIARISE anche: chains
- 21 August Prepared Petrosylyshin for the art de paried for Respects
- 22/23 Royal in four to Resjaints with Petusylvatia In Scar
- At Awayalesin, cast ofs tow and set return 24 August course for 00%1e1.
- A: Bistol, prepared target ship USS Car gener LAPA '00 for tow, departed for 25 August Keg [ð le] is .
- 76 Xuquist En route to wegately with Catteret in 0.00
- 27 August At Kwajalein: cast att tow: underway bot Bittol
- 28 AUGUSE M. BIRING, Frepared Larget ship (023 Study (MEX-50) for too, departed for keapalein with Proje in the
- 39 August Nirthed at Reajolein, case off your and proceeded to anthorage.
- 31 Augusti Assisted Larger ship USS Geneval (APA 80). for 75 ethnites
- Assisted target subbarine top Stipjack (SS 184) to divdacking 9 September
- 10 September Rodsafe positions beathed thewane: to: 40 ninutes to test the ship's buil for is disactivity (results antroam)
- it September Departed Awajadein for Fearl Harbur with NRT 29 for time. That evening beaved over five compactive (enders.)
- 3 October: Antibuck at Meeri Herbor.

#### (CE 2RA) (MAIS 22U

Crew Stre: 68 Sikts1 ALOII Aretical. 15 March 1946 Alkini Alpil Departure 28 August 1985 Shat Agil Localion: 24 sml (50 em) 5 Shet 84466 Localion: 12 mm (22 km) Wel I host Clearance: By 22 Howence: 1946 JUNE BOAL and FUNCTION.

Cigny was a solvage ship used as a support ship in 70 | 2.7 (Salvage Unit). Refore the operation

the ship was involved in soving, diving, demoti-Then, and underwater peatography fursthers to properation for the arrival of the resk force. Includ the operation its function with as a subm riue revoue ship.

Frai ARIE (1 July, UBCD)

Mi Jame

- Underway for area ourside of targeon, strabiling with  $\pi i (1,2,7)$  . :300 1 July
  - 1443 Ordered to pur boarding team No. 2 separati target ship USS Cation (MPA-71) after rerecursy ratiological clustance.
  - 1450 Underway from alongside Calcon.
  - 3510 Repeat next to Catcon.
  - issuiding team retrieved: underway from alongside, taid to southwest slife of tail ENDS: get thip USS Sateroga (CV-3). Underway, proceeded to carder ship USS
  - :532 New York (10-34).
  - 1666 Mooted next to New York after receiving radiological clearance.
  - 1648 1742 Boarding team Interded See York
    - Underway from New York to conhorage. 1750
  - 1905 Ancioned in perch item.

2 July

- 0820 0852 Boardbrog Twole boarded Californ for an Inspection.
  - 0501 A boarding area housded target slavp trail Briscon (APA 65) for an inspection.
  - 5605 A firefighting near was placed aboard Princoe.
  - 0917 too thre aboard Briscon was extinguished.
  - The fireflating party departed Bristop. The boarding party departed Bristop. 0925 0940
  - :01L A bounding term boarded target ship USS
  - CAPEOFOR TAPA- JOL.
  - A thre party boarded Converses afree a 5012 repose of a fire
  - 6020 The five about Cattern was out.
  - 1050 The parties resurned to glamp.
- 1185 1180 A boarding tests boarded target oNto 1885 Bernet (APA 60) to Inspect ships
- A boarding reas was placed on carget ship US<u>S Ration Tai</u>bog (00-290) for an 1242-1728 Inspection.
  - :415 A inveding seam boarded sample ship Ha gera.
  - 141 J. â fice pesty boarded Ne<u>vern</u>,
  - The fire aboard Magaco Mas BLL. 1509
  - 1525 All parries recurned to Clarg-
  - 454 A boarding term hearded target ship 055 Nevada (BB 25).
  - 1545 A Clis party bearded sevada.
  - 1605 The line on Heurite was not and fire party returned to Clamo.
  - 1641 the boarding party related to <u>Clara</u>. Roated exerc <u>.not pellowr</u> (APS-23) aller diservecking inisial branding cour to USS 3621 Whatton (AP-7).
- 5 July 1121-1441 Towns canges shap USS (highes (60-410) to its new benth.
  - 1850 Monand aborgando Magazo, rekalajag at that be alloc cominight.
- 5 3029 Alongside <u>magazo</u>, conducting operations to betas big abone.

9100 V 1000

Underway trom alongside Nagato.

# <u>USS Clamp</u> (ARS-33) 7 July

0964	Anchoted in Nerth 39	10 July	
c. 10. e. l.		0917-1013	Record portside to instrument tark with
6-10 mily	Magged to bury in reight array, install ing assemblies on mooring burys in farget		the technical ditectual abound to te unlawe the kank, sizer which the direc
	srea for purpose of moothing terget solps.		tors returned to shitting.
	orea for burbane of montrol render surface	1052 1505	Covered catget ship JS <u>Co</u> ngrighter (00
11 July		1/10 1/40	ITTI with chemical foar.
1114 1613	Retrieved Larget weasel MOC [] a anthor	1523-1643	Alongalide target sitte itts Regford 400
	and Look 1: in the builts new beight		1849 to cover it with fuan.
1855	Anchored in Sector 14.	1728	Anchored in botth Baker.
12 JULY		3. July	
1935 1110	Conducted diving operations to close	11)041225	Wanhed down target thip 085 Says Lake
1430 - 2010	tauled line from propulser shaft.	(24)	City (CA 25). Anchored off Reisol Calandi.
1430-2014	Moread in target area installing assem- biles on moreling buoys.	1422-1600	Also galde USS Tombighet (200 11) and then
	dires av mourtan, boofs.	1411 1000	<u>JSS Sylvania</u> (A04-44).
11 July		1843	Atchared in Denris Baws
0925-2037	Tourned AMOC 13 but Larger Areay.		
2103	Anaparent to terth 51.	l Rugust	
		0911 0932	Masted Grant target while U <u>SS P</u> ensago <u>ila</u>
14 July			{Ca-24}.
0511 0851	Conducted diving operations to felileve	1636	Insectigated cashs on target chip (ES
:15 1425	NTA-180 dechor.	1020 0001	Webrivelicht (DG 419).
1110 1420	Conducted diving operations to servive - ASOC-13 anchor.	1920 2021	Alongmide (alort whip Prinz Eugen while a radiological persity: boasded
1570	Anchared In bernh 74.	2253 3106	Riongside Earner while a recipionical
			contest coulded the target ship.
35 16 July	Prepared modeling buoys by the Largel	1123-1.45	Washed down fermacola.
	array.	k259	Hoored next to USS Chickappy (ATF-85).
16 July		2 August	
1845	Anchored in berin 14.	GTAL	Picked up bearding team from Whatton and
Const Barris . 1	24 July. 08351	0826 10tc	proceeded to Catron.
2000 34474 11	n July, Vesci	1100-1109	Mashed down ( <u>asion</u> ). A Reardship tham conducted an inspection
24 July		1000-1002	on Calcon.
1240	Wederway Los operating area allos picking	1120-1149	Applied form to farget vesse, LCT built
	UP & FOURSTY LOCA.	1405 2415	Sprayed LCT 1111.
		1446 .447	A boarding rear boarded (CT-1113)
25 July		1592-1957	Mashed comp (AT 1013)
1202 1225	Boarding Reat Scarded target ship 055	1625 1613	Boarding tesm boarded GCT 1015.
	B <u>lad</u> er (XPA-63).	1815	Anchored rear beach 160.
1004-1906	Husiding team boarded target ship (2000) 649.	3 Аценст	
1354	Andrane and in Sweth Baker, Albin' Atell.	0835 0411	Boarding Less from Whenton boarded target
141.3	Onderway for Larget vessel LCT 1013.		ship USS Butge (APA-68).
1451 1459	Jost fing team hearded LCT 1013.	0525-3934	A bearding team bearded Talbot.
1560	Deductory from LTT-1011.	0950 (158	Macher, down Talbot.
2609	Observed the sinking of Sanstoge.	1104 1126	A boarding team boarded <u>Brite</u> .
3641	Returned to anthorage in berth Baker	1445	Revied next to Chickeney.
27 July		7 August	
CR35	Underway for USS Kenneth Uniting (AV-14)	C645	Begen washing dawn Neverla
2.001	to pick up mombers of the Instructuration	0934	A never tak party boarded Nevada to as-
	Group.	****	sist decontamination operations.
1019 1144	Altergetide target while Jill Klagata CAPA	1293	Gecont selection upwork tone on Nevada
	Bri.		crased.
1200-1201	Alonyside Largel ship USS Cen <u>eva</u> (MiX-BA)	2449-3531	Retweed decort as that Son operations, atomic
	to pick up instruments.		Ne Va <u>cu</u> ,
1209	Alongsöde <u>Blader</u> . Januarianianian Grave besedet Blader	D. Lucz et	
)212-13.7 )330-\343	Instrumentation Group bearend Sin <u>der</u> . Bearded 14490: ship VS: \$1,10000 (APA-81)	18.790Å 9 9580	Begen deconstantnation operations on tar
104- 1944	201 43: LASPOCISON,	8064	Sector and the sector of the sector and the sector of the
1420	SALL unevolution Shoup members relations	1858	A party of six boarded Dawnon to annist
	to Miting.		decontamination operations.
1623	Moored neet (28 Ch <u>ickn</u> eet (AT**83).	00)(	Completed deconteminetion operations
/			aboard Dawgor .
26 July	Shifted to anchorage 1.450 yards (1.3 km)	1004-0155	
	Geneter of 200310, 280.	1352-1442	69). Bailtad Amar Brita
		1551442	esited down b <u>oole</u> Anchored in Decth 33.

## USS Clamp (ARS-33)

13 Magust 2459 1653	Conducted thering operations on Highgs. Moored <u>Highes</u> to bypy 12 pear (cocheb) Island and complete scored dear to it.	Occontaminat Operational	acathan. 17 mm1 (32 km) é Iom Laustham: (as Angeles Chearanne – 7 December 1946 nno: (3 December 1946
4 Jangari 0933 0937	Gnderway Iton alongsikie <u>Hughe</u> s to anchor- age Anchored news Sunchaps Island.	yore sh (in [un	a Function <u>5 Marbor</u> was a survey ship used as a sup- ip in TU 1.8.1 (Repair and Service Dati. etten was to and in the repair of damaged vestmis.
15 August 3015-3047	Conducted diving operations of repair demoge on hughes.	stol ABLE LI	July, 0900)
19 Kugani 0807-5400	Laying to neat Geneva.	10 June 1427	Underway for asea Parkard
1020-3140 1920-3140	Laying to an vacinally of tenget shap 358. Interpendence (CVL 22). Conducted putping operations on <u>Pensa-</u> 2014.	t Joly 1650 1840	Reentered Blaini Lagoon. Archered in persh 286, Bikang aroji
6154	Aschourd in berch 219.	2-21 July	Shitted to betch 108. Engaged in routine Activities.
23 August 0748-0832 0841-0914		Stol BAKER (	25 July, 05353
22 August 9752-0853		24 July 1420	Underway for area Parkard.
1140	Anchored near Enwork Scient, preparing to take matyor ship <u>USS telton</u> (AVA-Sai in fam.	25 JULY 1618	Ancholed at Konçelap Acoli
23 24 Jugusi	Anchored neas gallog, which was beached off they island,	30 July 6734 1957	Reported for Sikthi Atoli. Antopried in pecth 9, Birjal
2101 2358 2740 271 <b>3-274</b> 0 2103	Towed <u>Faliaon</u> to meaning buoy. Conducted diving operations on Fal <u>io</u> n. Anchosid in berrh 216.	L August 0725	Underway to swa to pump cyliaminated foeb ol) (contamination believed to be from interips matter and not from fadjarion).
20 August 1211	Lefr Biliont (or Kwajalein with Langet	0905-12]5 L435	Propert Contominated (1) overboard. Anchored in beach 209.
	ship <u>Vas Est 52</u> in tax.	) August	Shifted to berth Nan.
27 Nugant 1610	Societ Resistance Aloit harbor and let	i koqust	Shafred to twenth 269.
L925 28 Nogunt	qo E <u>ST-</u> 52 Yinderway for RéEint Arail.	14 August 1350-1560	JTF Landsale section bounded, imprecisel, and declared ship free of all radio activity.
1402 1570	Anchored at Bixini Acolt. Refi for exejatoin Arolt with racyar thip 1 <u>888</u> 1 <u>97</u> -9 <u>45</u> in twe.	15 Kagura	Departed for kwajajoso Atoli with crews of carget ships <u>USS Bracker</u> (APA-64), USS gare <u>ce</u> r (APA-61), <u>USS Bracker</u> (APA-64), USS
30 August 1,225	Anchored 251 545 of Kwajalein Aroll.		Carteret (APA-101, USS <u>Nevada</u> (AB 10). ( <u>53 Packarola</u> (CA-24), and <u>USS Warmeriget</u> (D) 419) Abbard.
)) Magust 3530-1600	Target ship LCI(L)-549 alongside.	18 August	Renivod Xwajalein.
5 September	Departed Swajalein for Pearl Nacbor	LT Rugana	Departed Residioto for Pearl Herbor.
16 September	Arrived Pearl Hotbor.	28 Анарият	Krrivel Pearl Hargon.

### USS\_COMSERVER\_LARS-091

Craw Size, Bó Bibibi Aloll Arcivat, 29 March 1946 Bibibi Aloll Gegariure, 6 September 1946 Shot Aftif totation: Approximately 27 mml 450 km) f Stot Barla Location: 512 mpl (22 km) Sé Gecontamination Location: Pearl Marbor

## 1122 COASTERS HERODE (AG-74)

Crew Sive. 195 @ikins 62013 Arrival: Prior to I June 1966 @ikins 62013 Departure. IS August 1946 Shol Addr L-catlor. 23 nel (43 em) M

CLYMER, GEORGE, See USS GLORGE LEYMER (APA-27)

# USS Conserver (ARS-39)

	lieanaste, 4 Juay 1947 rice: 1 May 1947	.6 302y 0953-1132	Conducted operations to recover surker.
	it was a univage ship used as a support	.455 :645	
	(10) J.2.7 (Nalwage Unit), its Invertions (vaging, firefaghtang, and emergency re-	20 July	
panks.	,	1045 (203	
SMD4 AMU (1	33'Y. 0401)		Solt Late CLLy and cranaferted it to LCT 1423.
10.1		21 July	
30 20 <b>0e</b> 1255	Underway too area outside of the lagran.	1012 1458	Hemovyd 90 mm and 155 mm guns from New <u>a</u> da and transferred them to LCT 1420.
	sugaring with TO 1.2.7.		
: 2019		22 Joly 26   351	Humanwed a lask latest from Arbanass and
1 001y 120	Ancopeed in Derth Baker, Rikin; Aloii,		placed it aboard LCT-1420
2 July		1355 (510	Network a tank ince <u>Netwo</u> rk and scand Perceditt in 197-1420
10:5-1115			
2215-2142	USS Rhind (DO 404). Disard(ng trana on tanget shop USS Stack	23 July 1919 2125	Wathed with USS Etiah (AV 19) in putting
	(D') 406).		anchors on surges submarine the Skiplack.
()00-()(0	A boarding tean and fice party boarded isoget ship VSS Davaon (APA /9) to ex	STOL BACKE (	25 July, 0605)
3377	thrautsh a face. Hoatding and fire reams let: Namaon.	25 Jely	
3451	insperied target salp grint Kunnt.	0455	Dande Swey .
1454	Proceeded to Larget ship (5 <u>5 Arkansas</u> (89 34).	.3530	Floked in target thip 158 <u>, Ge</u> sta <u>an</u> de (APA- 85) personnel.
19601	Entingations from accord A <u>thonias</u> .	. 125	Anchored off grew island
1540	Roarding teams resurned to conserves.	1402	Orderway to place a boarding team on
3743	Reanchored by beryn Balkor.	. 440	<u>Hot</u> re. Sutte Evand to be attli radioactive and
<ul> <li>July</li> </ul>			Conserves proceeded to southeast of
0825-1955	Hemoved stark of terget this USS Self Late City (CA-2>).	(6)ê	éfrey. Anchoret ati Aseu Isiand
135C	Dropped stack of Salt lake City in warer.		
1817	Anchored in Netth 50.	27 dely 1004 1020	a boarding coar boarded samp <u>sta</u>
6 July			Aragian (APA 64) 16 segment indigunent.
1336-1985	Cleared damaged Ryolphert Trom target : ship JSS Newsda (36-36).	217 1224	Boweding cost declared sourt. Receivered instruments from target ship
			CLE CATEMAL (MPA 10).
7 July	Continued salvage operations on Negada.	2238	Recovered instruments from tanget ship USS Corrierd (APA 75).
9 10 July	Continued selvage operations on <u>sevade</u> .	1239 1250	A bonnating twee boarded <u>Cottjand</u> .
11 July	Removed neavy gear from Arkansas	.410	N'i seconsted instruments were trans ferged to <u>in25 Kennech mititing</u> (AV-14).
•		1511	Anchosed in unidentified betth.
12 July 0740 (1355	Removed a hajt-stack and an attosed ray	al July	
	Item meyers and transferred them to set-	:310	A Neval Medical Recoards Seculary (NMPS)
	2420.	: 340	čman fotae ab⊅ard. A monitor agarde€ Prackwe.
23 July		111 1152	The MRS team boatded headaen and ea-
0944-1144	Removed (5) on guts from brights		torated to <u>"gaper</u> ve: with sill enteris. Instruments, and monitor.
is July		422- 436	The goingis and instruments were removed
D143 0825	Transferred 155-mm gav and conitage from . Arkanges to LCT-1420.	:108 1526	from target ANID V <u>AS Cato</u> on (APA 7)). ALS instruments were retrieved from Lar
0032-0045	Conducted selver operations on Ackersse.		ger ship QS <u>S_</u> Fil <u>im</u> ore (KPX-83).
2001	Anchored in Mikish Laguen.	1052	Tears bended target shap 068 Bladen . (AMA 60) to sense instruments.
15 July	• · · · • · • · • · · · ·	1602	Recovered Instruments shoard <u>B</u> lad <u>en</u> .
0125 1343	Semiprical a half-track and an armond con- from target ship VSS Bonneylvanis (SM 18:	1018-0076	Reprieved inservagenes [nam target shap - S <u>to Gene</u> ve (MSM-96).
	and transferred them to 1.07-1623.	1652	NHES porties returned to USS Surleson
1559-1744	Engaged in other sativage operations an Pennavivanta and transferred equipment		(APA 67) with all instruments and millions for Surface Studies
	to 1.47-1420.	6734	Antioxed in uniden ified beth.

# USS Conserver (ARS-39)

# USS Copyrigham (DD-371)

29 July		2 September	
1 144 2 367	HORS (may bounded Tailson and symbols) to	0501 1037	propared rations vessel 1.07-974 for sca
1	struments and animals. MARS team at these cade to tempore instan		14KJ.
L422	agents and aginess; Nee contactoristic to	3 proteines	Conducted salvage operations on sarger
	board.	-	value 1200 (AS Stiples & (SS 184)
1455 ::504	Miks Lean busided target ship USS Briscop		
	(NEWLIGS) to remove lostenments and that	4 Septembre	
	Pels .	0774 0937	Algonjatoe twicel vepsed LCT RIA, conduct-
1607	All animals, instrucents, and 60% per		Ing operations to remove it from beach
14/0	somer: detunded to Botheshi. Borbored by up/dentified pertu	3967	and sink is. Associated with states as ISBN 20 state Selection
1540	supported by duitance black betrue	UNC 1	- Ansisted 1933 bitdgeren (ASR 2) with Skip Jack.
19 July			Pace.
1320 1405	Anian's and ansargenis wate reprieved	5 Seprember	lett Bikini Aral? (cr Kwajalein Atal?
	from Gasconete.		complet cargos weapoil VDC-81 and supports
1426	MMRS personnel and all animals trans-		versels LCT 1420 and LCT-1184.
	torred to <u>But logon</u> .		
1724	Apphored off goes laided.	7 September	·····
F		)/07	Arrived as medjagein Aroli, remeined
51 July 0922-0902	Nashwa dawa <u>Belsco</u> w wirh saltwater.		- unitly Publicary (MM). Conducted palvage work on various camper ships.
0910 1915	Wester down blerken.		Bork of Various Lacger Million.
1146 4210	Sprayed eechemical and chemical feats on		
	Belscon.		A22 CONAMPHYM (DD 311)
1414-1452	Sprayed mechanical and chemical toars on		
	Briscoe.		109
1515-5524	Restfore boardes Call Lake Cyty.		Anriva) 30 May 1966
1641 1641 103	Sprayed ices on Brackgo. Anchased in unidentified bench.		Ceparlure - 22 August 2446 n for Shot A811 - 355 Bothineau (428-235) -
- 105	Accessed on anternet of even		n ith Shot RANIR - Builtenau
5 August			ration: 3,145 yazds 12 4 km) 156
0810-1268	Conducted aslvage operations on Salt Late		ocation: 3,591 yards (\$ 3 km) WHM
	City, Solt Lake City was declared very		lon Location. San Franchsip
	L COL MOMACOS	Synk Jaly 190	18, off sources Cylifornia
1420	Anchored to unidentified beach.		
2 Logoni		Fack US11 and	
0815-1627	Continued salwage operations on Sast Labe		tooyet Conynghad was a target vestel durien. NDS 145 CEC≂ mat evacuated bytone wach.
	City.		is served in Distrayer Divison 3 of 10
1155	Anthored in unidentified perch.	2.2.1.	
/ August		MOCABLE (1	104y 0900)
1751-1835	Recriaved Keny equipment from integer ship	20.1	
1854	USS 127 545. Anklated	10 June	Cine exprasted to Set (Sneed)
1074	Host 1.0 : 60	1.0619	
8 August		2610	conjugated declared realisticationally class.
C\$10-C876	Transferred Army equipment from 657 545		
	to LCT 2:10.	2 July	
13N0 50NP	Hoored to YF bueys to conduct diving	2245	file Capitator, a Buerttor, and Texas A re-
	operations to recover Bureau of Ordnance		surned as inspect for redisacitying and
	instruments.		explosive gases.
9 10 Acquet	Continued diving operations to recover	Navy data to	dicate that Conyrigham was found sa(# [a:
	Beceau of Ordmance instruments.		of that remaining receivedness returned on
			tpl for shifting encharages on / July.
12 to August	Continued dising operations on recover		rained enchosed in Bikin' Lagoon.
	Byzeau of Codmance Shetruments		
14 August	Located Larger submitting Loss Middled - 198-3065.	Shar MARIN (7	25 Jely, CS35)
	104-3 <b>0</b> 0).	20-24 July	
16 24 August	ContShumd Giving operations on Arbansas	1170	Come evacuated to bottiness
••••	• • • • • • • • • • • • • • • • • • • •		
75 August		10 Dully	
0900	Case of I lines to Arterisan Lucy. movered	i940 ±140	Modired down with seawater and Esamite by
	το ότιστο γους το το τ		LS3 byliver (Juss 23).
20 8-9458	Shifted populity over survey target ship	1. 1.	
AN HEADLE	USS Secologe RCV 3).	): July 14/0	washdown with foundly reaginging,
	the second and second		
		1592	PAGAGE SEGRE ARE POPULACE AVEC DIACES
27 hugust-1 S	iens etters	1944	Padrate teams and monitors were placed aboard.
27 Mugugt-[ 9	epterbor - Conducted Civing operations on <u>Setatog</u> a.	1997	

## <u>USS Convegham</u> (DD-371) 31 July

- 190: Radiological conditions were such that work parties could be put aboard for lighting paradob of time to Carty out rocal, intensive decostanination work.
- ) August The decomparison party name on board <u>Convergions</u> cor the adiowed 4 hours in Stink the top decks
- 2 August <u>innythe</u> scrubbed and based down. The multi-and the entetline were slightly higher than average.

3 August accubing and bosting of Conjugated was equilationed, catipying posted on flated paint accas was begin, and its hole was scrubbed with the water and dieset off theferome 4).

- 2000 How ded by the Balkipu Snopholion periods and decisied Griget smeet (below 1.1 see gammer24 hours.
- Bactine growth tron Congrighters portwater:Linn was scrubbed.
- 6 August Took readings of ship exercises at.
- 7 Number 2 Crew coursed to Borriseau each night eacept for engineering watch (Reference 4).

Radiological readings for <u>Conyneter</u> (3) July through 7 August) are listed in Table 3.5.

#### Table A.D. Raciological readings (4724 rours). USS LorgingRam (CC 311) (31 July through C August)

-				
Date	075'CE	Averdyn Topstide	Max inc. Be over	Kver Lyr Sel 74
	·			
s) Jung August	0 6 6 354	5.3 9.25	0.15	0.05
2 44,451	54	9. 5	0.5	0.05
4 August	с з	Ç C-8	: 3	C.04
b August	0.12	G (145	<ul><li>C))</li></ul>	0.07
1 901011	\$.07	0 645	9.12	9.62
-				

₩otes

After decontarimation offacts.

balo reading

Source: Seference 4

8 August	The radiate inspection party declared <u>Cotynghes</u> wale for astoarding: all per
	Sarcol movied on board and pairwing of the shap began (Peturence 4).

--

- (2 August Clearance was prevened and all personnel wave evacuated to USS Rockbeldge (APA-228) on a 12 hour basis (Reference 4).
- 36 Rugust Streeter and enterior painting of <u>Comput</u> has was completed (Reference 4).

- USS Cortland (APA-75)
- Fifthugush <u>Convegian</u> declared radialogically sature for reboarding (Peterane 4).
- 22 Norther Left Bikini for Avajalein Acoli.
- 23 Rupper Acclued as Wegaletry
- 28 August Departed for Pearl Marboz.
- 3 September 2021 Arrived M. Pearl Mather.
- 12 October 1251 – Lett tor sam Francisco.
- 17 October Arrived at San Francisco.

#### USS CONSLAND (APA-JS)

frew Site: 89 Bikini Atoli Arrival: 30 May 1966 Sikini Atoli Geparture: 19 Augus; 1946 Drew Iocation for Shot Abil: <u>JSS Artemik</u> 1464 21; Shot Agti tocation for Shot Bacin <u>Arcanis</u> Shot Agti tocation: J,140 yards (3.5 km) MSM Deconterination Location: San Franchico Upers:tonal Cicerator: 5 Movember 1946 Fingi Civerance: 16 December 1946 Deconfering 30 December 1946 Scrapped 5: Maret 1948

- Task Unit and Function <u>Cost[and</u>, an assure transport, was a target wersel duting CROSERVACE. The coweres evacuated for each shot. It seture in Transportation Division 92 of FU 1.2.5 (Netchard Type Unit).
- SPL: AB ! [4 Qu'y, 0920;
- : July 1407 - File was repaired aboard ship tkeferunre 5. p. W 011.
  - 5619 Cortiand separted Gelger aweer.

2 July

- (440) The initial bracking team returned to <u>Contland</u>.
  - (83) Remainder of the crew secured and costal souther on board West to sund.

A to July datage expect status that there was no bajor damage and no need for an examination by the technical scaff of the Director of Ship Material.

Shot BARLA COS July, OBUS;

24 July 2950 All personnel resourced to <u>Arcemin</u>.

- 25 July 1142 — Cott<u>lay</u>d cleared for boarding 1999 — Reported Ceiger wwwert
  - 2117 Smithared codialogically from venterwave 5. pp (=19 and (=12)-

23 July
 375 Teams & and B rebearded Cortinend (Reference 5, p. VI D 54).

 July <u>Contland</u> one returned: worsail routine iconsided.

## USS Contland (APA-75)

## USS Coucal (ASR-8)

A 30 Joly Communiting Céfficera Domage Repairs No. 31 Stated that the ship was slightly over relations in radioactivity near the waterline iReference JF.

- perfect to berthe 149. 2 August
- 4 5 Millionte Ment on a scheduled practice run.
- 13-19 August Received aboatd 14 officers and 305 mar listed wen from twrgen whip dSS #evada ((ph. 36))
- 19 August £621 Departed for Sectore [n Ato]]
- 20 Nugast Acatves at two caless.
- 20 Notices Opparted Amagaveir for Pesti Hacbor.

#### USS COUCH (ASP-8)

Crew Styles 117 BILING Alast Arrivet. Potore | July 1966 Biking Alogi Departure - 4 September 1946 Shot ASHL Location - 22 mont 139 km; E Shot ASHL Location - 22 mont 139 km; E Shot ASHL Location - 12 mont (22 m) 56 Decontemination Lasifian. San Stepp Operational Flear Jose. 10 January 1947 Sina' Eleanance: 18 Sanuary 1947

Sask Data and European Course, a subwarine product vetter) was a support. ship in TV 1.2.7 (Salvage Onli). Its functions were salwaging, tiretichting, and emergency repests.

Shel Adit () June, ORIGI

30 June 1625 Onderway from Bikini Lagron. Proceeding to join Te 1.2 7. 5,800 yards 2)03 14.6 upl attern this Rechainer (Alei 42).

L July

125%	Bulered Alkini (mpava.
5735 3855	Placed scientific parties on Langel ships
	u39 Conjunghap (DI) 3723 and UCS Seensy3-
	eanla (lus-38).
1950	Anchored in berth Love

4 *2*017 1430 1874 Sectorization survey group from USS\_Mayon Official came aboard 1525 5743 Conducted diving operations. Authored in unidentified thesh. 1962

5-6. 8 10 3074 Diving operations conducted around rarget. andp Und welliam (Acc. 57).

12 July 1115 Ren line from store of tanget ship use Licula (APA 66) 1490-1920 Engaged in diving operations. Ran iwo tires to Bryte. J.I. 2019 0145 1815 Diving operations continued on Gillings وايتر ال

0500 1345 Diving operations continued on Gillian. 1095 Took in tow and stern lines from Boule.

- (5.0419)
  - 1010-1445 Diving operations on ranger s>10 USS Lagson (RF)\$71, was a cative from post and bow to takget ship USS Nevola's (BH-36) monting buoy.
  - 16 27 July Continued disting operations accord Las son.
  - Son a modifier line to larger while (53) 20 July Fallon (APA 81).
    - 0830-0030 Conducted diving operations on target ship <u>Sakawa</u>. Conducted diving operations on Salama.
  - 1400 1800
  - 21 July Wall a Samila line flue part quarter 40. sheet of heaper of programming of 331. Conducted diving operations.
  - 22 3014 Made a Ferripotet movering 100 (met 131) meters) off periside of target submarine USE Agaigue (SSI AGA).
    - Regan vertical Appropriation Carlant Cartas. After Apograp was submorped, conducted diving operations. 0950
  - Z3 July Engaged in diving operations in the vicicity of Apogon.

26 July

- 0600-0644 Flooded rarges subwarine OSS Pijoufish 155 3851
- Shul PAKER (25 2015) 08351
- YERE 25 0460 In Termanion with USS Converve: (ARS 091. 155 Midgeon (858-1), and USS Regard (84-ाधाः । \$750 Took position in fermation of f0 1.2.1. 0010 finde rway 1400
  - Anchored in berth 5. Blitical suggest.
  - 1610 Observed farget hills PS Sarahoga CV(4) stek arean triat.
- 2n July Solited to webdeatbilled terth
- 21 3439 OŘIS Ordenesy to nation submittle sits bona 155 703), rap alshours in Turo 3130
  - Commenced blowing Tyng's Dailast tanks. Toba Broke Souface 1115
  - 1730 Underway, rested all sea injections with Guiger counter, conditions found normal. 1040 Shideed to unidentified berth

28 July 0690 Underway to go alongside target submarine. USS Generada (SS-335). 015 Comprised blowing pallast Canto do Deci turia after engaging in diving operations. 2140 Secured diving operations. A cloced in action (fiel terts) :511 29 July CB40 Underway to colle alongstow carget sub-MALLARE LTDS Samatements (138-196) Book (104) ნციუ.

0945 Commenced booking airhoses to Soaravan. 2698 Demended Directory Seargings's Ballost Lanes. 1230

Enderway .

Rochased in childenthiled Lerth. 1104

# USS <u>Coucal</u> (ASR-8) 29 July

1656	inggeneration alongstrike to care or Sensitivaters	6 Septembre 0.40	Reference Meajaielt inlegans and accounted LLT-4-2 and LLT-874 Anghored in terres
32 toly			1.4. And additional and antipation of a constraint 1.4.
1955-1155	Rade a two pairs modeling over submarged target ochrotine USS Skip_ark (SS-184) and began theming Skip_ark a tailest factor.	7 September 1990 ht 90	Radaal+ inspection party, consisting of three officers from Rayes, eboard to
1306-1325 1391-1353 1896-1353	Conducting d'allog operationnes of Skipjack. Hiem bailant sanks og S <u>kipjack</u> . Kale af Neurpoint overslag over sabernyed sabearing Signijsk and began kirming	() Supported	Trapest for roditistication by Results not recorded in Ing.
1019 (546	its ballast canks Booke (Balpobet Housing) No. Nated to telefold (Disc by the	(841) 22 Peptemin:	Departed KweSalvin ist Pearl Marbox with Ski <u>pj</u> eck in twe
3. July 1196 1335	Represignationale (G. Schrieven) Regari buowing Sentaven's ballosa tarAn.	1500	Mawred at Rear? Marbox after releasing Malpjøck (for tip tow)
1455 1406	Undersway itom allo gelde Sentidezen Care alompside tanget superitie (55 Parcoe (55-364): sentio bear elon e Gel		122 COCCM (MSL-14)
1418	ger Modelto, to Charle and a sea and a sea <u>Parche</u> Noar ser snet ivos Parche.		te na 1 June 1906 Separture, −21 August 1905
2746	An conversioner Roma Island	Chail Afili yee Chail BAREY In	arganoure, e exploit neu actor, Peagainto Atori suttur (e en 180 emginti un turaturo turaturgeno
: Angost 1240	Medecway to take soundings with Seager meter over Principal Agenger, and skip jack.	Operational C	ifeorănie: 43 Janeary 94; ice i Peorlary 1946
:615 :#30	Hooved to QSE Sylvatha CAKA ∜4: to take on foetyet. Anchosed in whitenUllied Marth.		ifunction a landling staft t∺patt stap, mas a support TU if i gepatr and Seculae Online, it
2 August	Englight in cluing operations to lay a	served a	is a repair facility during CROSSROADS.
	Juan positi Motel	SHOU BELE AS	36 (Y. 6898)
3 Magunt	Noored over Sgipjeck: conducted Salvage and diving specalations.	r(4) (4)	langanites ≫aajatetu Atoli Éur Mikimi Atoli
4-9 Xiiguna	Conducted during operations on Skipjack.	2 July	
NO Acquist (215 (210-1986)	Completes four point root over Apogon. Conducted diving operations on Apogon	3145	Applyed of Billion) and anchored in Death No.
12 August		13 1114	LCT 412 winnigs (de.
1115	Conducted diving operations on Apoyon	15 July	Table) mailp inf (157 alongs)6+
12 Xoqusi	Made flows point modifing contribution and engaged in diving operations	2001 SAKEN (2 20 July	15 July, 1855)
33 August I ;	eret <u>Apor</u> on. Disting and estimations operations continued	113: 25 - W-Y	2) maring is culure with 12 other ships.
2 September	Orderway to Apoger to assigned andorrade.	0902 1715	Negaring for Rongeley Acoll Anchorod at Rongeley Acoll.
3 September	Noared to Scipjert to and Midgeon to all Veging Skipjert	30 July 2795	Condensaty Con Million Adult.
1702 1416 • Georgeon	<u>Salp</u> ac <u>e</u> sulfared Underway to anthoryy:	y!یل ا3 ۲۵۹;	Arcium) of Diking Abs.) and archaiced by Denth Se.
<ul> <li>Septimes</li> <li>06%C</li> </ul>	yas corsenges (MRC 39: came alongside on Priog target vecte) (20: 874 elongside.	2 Кодом	NO 1 Y 1 77 1
1990	USS Dajmyra (ARS)(T)-00 (over BAKER for get veskel 2017-432 alongside, commerced (Egging 107-422 and LET-824 for fowlog.	1704	Shifted anthorage is area between better Sall and Vicsor.
:e10	Departed Bikint for Kwajalots with 105- 876 and 147-612 (* two.	7 Ragust	Beturned to bernh 96.
		21 Aregust	Left William Atolik for Reefalstre Atolic

20 August

II Geptetter Depetter for Peak Notbor. USS CARITER<u>OR</u> (APA-77) Gree Size: 112 Sikbon Atoli Arrival. Before 30 July 1946 Gree Location for Shot ARIE: JSS <u>Benar</u> 14PA 737; Gree Location for Shot ARIE: JSS <u>Benar</u> 14PA 737; Gree Location for Shot RAKER Devar Shot ABLE toration 675 yaids (61: vetens); KMM Shot SAKER Location 675 yaids (1.7 km) KMM Decontatination Location 540 Francisco Sunk 5 Uclaber 4948 off the couthern Lukifornia coati

Arrived Awajatein

Task Unit and Function Criticondeg, as astack tradaport, and a target west well during CRESSROADS. Its even was evenuated for each shot. It served in Transportation Division 92 in 70 1-26 (Meschant Type Unit). Criticoder, was moreport with a law-involution table become as a directional wid for the photographic electrics.

Shal	ABLE	11	Juhy.	2988.0

#### DO JUNY

0916 Commerciated to Ber
--------------------------

- 2 July
  - 1600 C: Litensien reported Geiges sout, but to parted safe to work on for share periods (Reference 6, p. 7 36 N). Remained Sou; throughout the day (Reference 5, p. B-1).

## 4 Duly 6845

- 0845 Jeans & and & reboarded.
  - 1990 Celelenden declared rediologicality sate by the radiological teas from USS <u>Naven</u> (AN-12).
  - 1345 Personnel Segan reboarding.
  - 1412 An occanographic party came aboard to conduct an inspection: the Ship Measure pech Droup and Deck Survey Porty came aboard to inspect damage.
  - 1445 Padiciogical Group cade on board to inspect ship for sativingical runtanism tion.
  - 1510 All pareles jein ene ship.
  - 1600 Samples of California Incohester sent to Knyen for sadiological tests
  - 1835 All officers and they left (or Benat to cept gangesy and security watch. Security watch made rounds and hourly reports of the satecial coofinion of the ship.

## 5 July 0800

- 0400 Cificers and crew boarded from Benar 1345 Food samples sent to <u>Haven for radiatog1</u> call tests
- 1400-1430 The Commence Group case aboard for an Inspection
  - LFi0 All officers and unlisted wer returned to <u>Bettar</u> except gangway and security match.

e July

0845 The clew returned to Printenden.

Sont BARIR (25 July, 0235)

75 July 0745

- 0°55 - Gene sugarized in Nazar

- 8 August Boarding seam 5 from pr<u>5 Simpler</u>k (AN-80) hearded. Reported Collarender Colliger Sole. Dyper deck average 4 0 K/24 hears: hot sport 10 K/24 hears: tradies and each deck 0.5 to 1.5 K/24 hours: Evaporator room and lockard engine room 0.35 K/24 hours.
- 12 August Commanding officer. S officers, and & guissed men hearded for opening the whip. Tolecarce take I open topside, give 24 locurs below decks.

(3. (5. and 2) Request Ship was retroorded but customs of person pell and time obsistions income.

- 22 Acquict Optitionden was recoalded. Its waarnum puriside copaide reading was 4 9/24 sours, resident starboardside copaide 7 8/24 hours, and warruwe builde 0.5 9/24 boars. The conterns calored to Begar and the samp closed Undergroup 9.
- 20 August Arrived at Weightein. Topside average 0.05 R/24 Journs (Reference 1).
- 28 August C<u>(1)</u> tenden decorrissioned.
- 1 October Topside average 0.52 8/24 hours iRefet ence 71.
- i Devember: <u>Calcongéen</u> departes Kwajarein cowed by USS Cenusila :NTF (52) on conte to San Frêncisco

#### USS CLOUBERGAND SOUND CAY ITE

Crew Size, 540 Bikani Atolik Arrival, 3 May 1946 Bikani Atolik Geparture, 1 Asgust 1946 Shot ARLE Location, 19 Anni (35 km) SE Shot BAKER Location: 19 Anni (34 km) SE Uccontamination Location: Los Angeles Operational Clearance, 3 December 1946 Final Clearance: 3 December 1946

The polyland function The polyland conder Composition (good was used as a degrant Ship in TO bill & Unscrumentation). Its Sunction was to provide laboratory and base tachilting throughout the operation.

Shot ABL! (\* July, ONDU)

I Jely

- 1423 Prenticevel the largoun and enchored in Justic Mi 1765 Shifted to bench 147.
- 2 July Sulfred in Barth 56.

## USS Cumberland Sound (AV-17)

Shot CAREF (US Buly, DE25)

25	 ъL	•

5509	Enderway for area outside the harbor	
	(Reference 5, p. D-3).	
5 te0	Reente; of the larger	
1.425	Anchored in Detth J84.	

- 28 July Departed the Lawrence
- 29 Duty weturned to Tayoon and approved in Derth. D.
- 30 Duly Skidled anotherages to here's 50
- ) august S541 - Onderway for Sat. Pedra.

#### USS CURRENT (ARS-22)

- Erew Stre 194 Bikthol Abbit Arrival 13 June 1966 Bikthol Abbit Ceparture 125 Jugust 1946 Shot AR & Location 127 eet 150 vml f Shot BASIR Josafilos: 12 mml (22 em) SI Decentamhabben vocation, Fred Marton Operational Clearance, 15 February 1941
- Task Unit and Lanction Corpany was a salvage ship used as a support ship in To (10.7 Galvage chittle for furctions were setveding. fitning with repairing damaged categor vessels.
- \$568 JB.S (1 July, 0930)

1 DV: Y

- 0962 Indetway to stiking Lagoon. 1214 Received opters to centry the weatry area until ordered forward, proceeding shead with bare perdany.
- 1256 Passed channel budy 5 obert to post: ob served various fries and explosions in tacdo: acea.
- 1415 Indexway in company with ATP/87 to pit out fits and place boarding party on carget shap (<u>38 Penney</u>)whith (36 18).
- (ed) Mathematic from the same of <u>Perspectation</u> by under all CTU ...2. I due to heavy explosion from secol ship JBS Independence (tot. 22)
- 1525 Underway to go alonguide ATR-A/ to make Generic counter next of fighting equipment
- 1535 ATR-67 underway from alongside.
- 152 AfR-42 stongside to have Getge; counter best made of firefighting equipment
- 1556 ATR-40 underway from alongside
- 1604 Underway to place bearding teat wooded Pont<u>eviluante and extinguish likes of</u> superstructure deca.
- 1624 Boarding party and flootighting party aboard Pernsylventa.
- 1968 Fires extinguished: firefighting party and boarding leas aboard
- 111 Underway from alongside <u>Pennagivanta</u>, pacterding eastward anastrony Instruccions. 1719 Juderway to berto M.
- 1825 Archaeed (\* Serth H. off even Estand. Bikint.

> 2017 749 takening the complete Ausperliter of Asiget accev. 0510 Boarding tear member came abband to resume during with boardang team. 0850 Record alcooperde target ship 1789 Fallon (APA dbl and placed boardhap ream on board, also fireflyhibrd ream of itree tern through to entities by second entrop [fee on Corecast le decui Solarding party and fizefighting party terutned aboard from  $F_{\underline{\Phi}_{1}}(\underline{h}, \underline{h})$ 3920 1923 trate way from a longs (do Patter proceed) ing to go alongside target ship USS Salt Lako City ICk (251. Repetible galde Sale Lake City. Maced baarding and firefighting pecties. 5090 6940 ne Satt<u> Lake Ç</u>îty. 1025 Observed target ship Salawa sinking by the stein. 1235 Southing team and (teeflying party ce corned aboard from Salt lake City. Underway from Sait Lake City, proceeding to thinget submation uses apogen (25 MB) .945 Residing team Species Apages. Rearding team returned to Content. i.m Underway from alongside Apogon, proceed ing to target submariay USS Skyujaca ISS-1025 164). 11.52 moused atomystop starboard side of skipinch and placed breathing less on board 1700 Boarding ream returned aboard. underway from allongesde <u>Skoppars</u>, pro-ceedary so viribility of independence to 1202 tolice is so new making and wester in mooring if necessary. mound to independence in seep indepen-dence s'ear of veryets to ases 1123 Independence in the by 195 Chickesse (ALE-83), cast off Trees and Stond Clear. 1412 continued to follow independence to one exering. wiredraw from independence, proceeding 1504 tu USS Monactor, DRP-71. 1359 Rearding rear left the ship to return access the loss. \$400 Proceeding to weblward area with independence to assist in society. 1120 Charkesaw completes moorting trappendence. throughout another to beach JEG. :15. 1 Julγ 1925 kadholugical tees and bearding team tit came aboard Current to conduct radiology ral and dymage survey of tedependence later. 39.50 inderway to independence. Inspection party and boarding trees left 1032 ship via boat to ga aboard indep<u>endence</u>. Anothered in best 200. 83 **(** ) 1249 postding perty and inspective party se second aboard. Underway to Meanton to discharge Enspec sion and boarding parties. 15.2 1633 Laying to off Whatten, discharging inspection and boording parties. 2 648 Anchored in Decch 15. Underway to new Derits. Anothered in Death 31. 1706 1720

4 July 1952 - Ondernesy so go slungside target vessel avare t2.

# USS Current (ARS-22) 4 July

## USS Curcent (ARS-22)

1154	ANCROFED (ICAN IC ANNÉ 31 ATÉ ROAM IS - Trant	10 July	The benefit of Benefit (B)
1359	land. Onderway: warewerting to go alongslog JSOC-13.	2050   245	<ul> <li>Anconted in Series 161</li> <li>Commercial divisity operations (or monified buy sizes).</li> </ul>
1410		6760	•
1420	Record alongside Nation 1. Conversed bligging pumping equipment Aboard Axis, 13.	1744 1905	tropped applies now for enoring been riser. Conferred scarch for enoring been riser
1700	Signature postpring afterpary roots of ARTK: 21.	11 July 0777 1948	Confurged diwing operations
1726		1157	
1740	Afterpeng room dry. Siereg-S pumping Attribute somperformtis of - C styck	1733	Broberskay. Routsered to terral 32.
2140	Tank 15 and widship comparament day. scopped perges	12 July 1202	anderway to go alongside target onlp USS. For 125.
5 July		1250	Recred alongside :ST 125.
	Analogical and conservation in the sec		· · · · · · · · · · · · · · · · · · ·
310	Disconnected all electrical leads to	1140	Removed under another single 1.82 1.25.
	AFOC-11	1457	Honred pertology to seem of 137 875.
1126	Handeranday telah AADA, 13 (ni Karayes Subbaartan) 1855 <u>Sik</u> ate (185 305)	15,5 3521	- R*Techent kentye ancher: No oterro of tβf. T≩5.
2141	Hoored alongston Skatn.	1525	Underway to bereb
2.145	Starfed klearlog wrechege on Skale	1449	Anothered an bereth 74.
1999	Transferred Skate's apphor to Current		
1635	Dives made dave for Skape's pow anchor	il July	Anchored in berch 31.
2744	Seale underway to antheraje		
1 (8)	Recovered stein andres of Skale.	[€ Ju]γ	
1 (53	Underway to accumpany State to anchorage.	0690	Underway to pick up hydrophone cubic.
\$5.30	BlinderW from Accompanying State, pro-	0637 0644	Anchored
	reading to ARX(1)	0540 1359	Conductory (319) by operations
154+	Anchored off Energies Land.	181	Underway to ancherage.
	Anethical dit Hard Skidnet	1243	Rue Desided in 1-4446 3).
		1.4	KIKIPITSI II. I-IVII II.
e July	weather a second second as business to		Revenue and the second
Ç <b>Q</b> 30	coderway to an alongside Anor-19	the Bully	Reminised up bored
6944	Macred elonys(da AROC 1)		
100% 1740	Removed salvage equipment from ANIC-53	28 Julγ	
	ta ship.	9632	Underwiy to go stongside Nagajo.
1245	Smoorway.	-073C	Mosted portolide to Migate in Derth (02
1327	Drepped Anchor in unspecified location.	2607 0817	Monsted Magato & sterr Anchor aboard Cu:
1444	Wederway to Kake (Urget ship Mageto in		pent.
11	com	367)	Rected StarboardSide to Nagalo
1501	Decoped Anthe: Alançalde potialde of . Mégale:	6915 0910	Hauled Nagaup 5 stern annhor aboard Cur rent, clusted lings and underway
1:05		.a×	
1.07	Ran Jine tt mesninej biev oli bo∞ oli ka Gato	- 42.9	<ul> <li>Anchored close to facter ship Prime conject to anchoreage shiph of period late.</li> </ul>
1925	Deopped part anchu:		. The second s
:810		17 July	
	Secured towing cubic to wagato't monying		In desires the success of the destruction to
	2007	\$ 299.	Underway for center of target array to
			bay Instruments.
9 July		2959	Meered to meeting bury in centre: of car
1068	Ondelway 527 merin (62 with MAgalo th		QAL ATIMY.
	Low.	(19)e	<ul> <li>Committed Caylog enchans and vable with</li> </ul>
1,44	Relvaged cowing cable from Magana.		instauments attached to cable
1323	Maneuvering to go alongowde Baqare	2096	. Underwhe in pick op cable end attached
3 155	Robrés politide la Sagara		Lo accuring budy
		2051	Mooted to mooring buoy Sk connet of rate
8 July			pet airdy.
0810	Underway, laying to in wininkry of My		1
	44Co.	ut July	
:059	Monared persolde to Kagare	1775-0807	Scoducieri diving operations to retcheve
		1775-0001	
1423	Underway from allowyside Hagaro.		1° table.
1510	Reared portside to starbourd side of	0942	tostroacot cable baying special loss com
	Nagate, respected righting coving wire to		pleted, underway on route to berth 31
	bow el <u>Negaro</u> .		
1835	Contouced rayging foring white, underway	19 July	
	from wiongside Negelo.	1306-1005	Through tempet while 400 General LARK 661.
1401	Anchored to <u>Nagalo</u> .	3))0-13)6	Cirtind Failog.
		1325	<ul> <li>Dayting clone aboard stathoard of Montroe.</li> </ul>
9 July		P 2.04	Refuring to berth 11.
5/16	Underway with <u>Mageto</u> Solitow.	1428	Associated in Swith 31.
0846	Nagate dropped andor: Current cast off		
Quert.		20 July	
0024	IOM An Annual In Annuth 51		induced and the second constants
0934	Any busyod (n. Ser(b. 3)	052)	Conferringly for precisives, another

## <u>USS Current</u> (ARS-22) 20 July

3927	An Nord Close to statboard dow of talget - shop pap garatoga (its 1).
1455	beep set divers underwater to seated to:
1432	anchor. Deves back on board.
1926	Diversity deep sea outfill peacened for
	anchor
20 taly	Recultured as granted for (asy 16, 6) in (asy inc.
1051	Sat <b>an<u>og</u>a.</b> C <b>ommen</b> ted discrig investors to file conversy
	st human atches.
1349	Continued to assumpt to seconde heads - and Not
• • • •	
27 JULY 2600	Anchored in remoter of target array Indexwey of source to berch st.
0750	Received Lideos to go alongstide 100 Repairing Molition (AM-14, to pack up pres
	Repression and they can be a post of pression and a superior of the second states of the seco
123-1155	Altengeside Whiteling, Loadvog pressure
1293	geogra Unviernny brom Whiting to ley lastrument -
	Бирун
1732  340	Anchored in center of target array. Number one instrument body laid in post
	1540
:414 144 1	Underway to lay instrument hopy #2. Anthores:
:510	and terest. Taid instrument source ₽2.
(54)	Orderway.
1546	Anchoted
1851 1713	Laid Instrument Ducy #3. Rade new antipulage:
2850	hald instanent booy P4.
1855	Underway to new Anchorage to keep clear of months and Statisment bucks in target
	ditay.
:927	Auchored 300 yeards (274 betweet would of
	Prinz <u>Rugen</u> .
21 July	
9140	18 <u>88 Mend</u> eg (MASE 20 Kabe alongstör för i Take abourd Nove andros
0640	Mender underway forz alongside.
120	Underway to conduct diving operations of
	The comment taxay.
(430) 2415 1650	Secured line to target ship (55 157-19). Conducted gluing obgrations.
1215	Underway to anthusade borth Ji.
1805	Anchos edulars Desire, TS .
24 July	
1207	Boarding party cape aboard.
1525	Josephany for SAREP day.
Shot BAKER 17	5 Jahr, 8835)
25 J : I Y	
1145	Entered 174 harbo:.
1234-1219 1407	Alongside <u>Cenevy</u> . Real the Roll's point of Ener Inland.
1410-1582	Niongside carges westel 607 105.
167:	Rachaeod in berch E.
26 July	
1927	Shifted to anthreage off Ener Island.
26 July	
1724 1993	Subred alongside target ship JSB LST-545
	tor 9 minutes to place aboatd and recover
	a boarding party. Hoored alongside target ship USS <u>US3-220</u> for 6 timutes to put doe; and recover boarding puty Hoored
	give; and encyment base Ging party Howers

## USS Current (ARS-22)

subliquide target vesses 0.22929 for 1 hours 1 minutes: bureding party elevered 0.01920 for 51 minutes. After departing 0.01926, correspond washing down carget vesses 0.01927, after which a counding form was placed on busid for 6 minutes Addressed in andertailed beth in Bistar

- 25 July 1841 3620 Moored alongston LCL-327 Jon 1 hours 26 minutes. Parch bearding party aboard for 36 states, after which (CE )2) was washed down: a second boarding party aboard (or 7 minutes, Mootwa alongaide target ship USS matricight (00-419) for If provide, boarding party aboard for 10 minutes. Circled seaplene for proto grag0.10 parproat. Aboved headding parties aboutd two knowlenges wile the ship is pothewhale boat. After servivering boarding parties and boar, moored alonguide targue ships the managed (000-889) for 16 minutes: boarding that aboard for 32 timutes. Nutred alongiade target ship 105 Cgrteeys TANK (0) for it connes, boarding that aboatd for 15 minutes. Cartles and weshed down sugfaid for a bound licensuide sugtend for 5 strates, boarding party abound the 3 Alcutes.
  - 1704 Anchored in condentation Services Backs
- 00 .00 kg 9991 - 21 24

Joby

L JACOAR

1653

- (1-21/4) Macheel diem Mugdend with frank worktee for 1 Nemt, 68 wirntext planet brandling party woord for 9 clinites to rewow and higher back one postrument, washed down Walmweight for 1 hour. 82 wirdless placed bounding party aboard for 16 wirdless Set boaring party to inspect longet we set LT-1114r curathed within 10 wirdless Goal feir again with demoistion coam to place a dynamics longe on LT-114 Righteen wirdless placed and liked 25 wirdless later, 407-1146 coak in clase Withing dieter, 407-1146 coak in clase Withing dieter, blacel.
- Solely nonless came aboard them USS\_Heven (Art 12). Notice alongside <u>Heglors</u> for 3 board, 9 states, Heating 1: down with water from forward and surfling monitors: possibling party aboard for 0 minntor, maximal down range: only USS <u>batter</u> (Arts AR) for 3 hours, 28 minutes. Posted alongside State for 35 minutes. Log party placed on board for 25 minutes. Lay to off USS\_Camborles black for 10 for 25 minutes to transfer black for 10 for ered from <u>Heglord</u> in <u>Camborland</u> Sound.
  1805 Approved in led of Sound Land.

0651 1572 Washed down target ship Q<u>25 11; Norde</u> (AFA 650) bearding party sbuard for J Sinates, washed down target ship LSS Mig-leo (APA 6477 Searding beam abosed for i) electory L125 Anchored off Fore Inland.

7 Neguet 0925-0273 - Box

3213 Hostowic Britonow for 64 minutes Washed down for 705: Sounded but for 1 minutes.

## USS Corrent (ARS-22)

- Augusti Mashed down Brackers: spanded to: 30 win oben. Mounted down (Arget ship) by: 1938 4001; Boarded to: 5 winning 1438 Anchered in Pikint.
- 1.32 August Conducted dividing operations over writek of Apoyon.
- 13-20 August Conducted diving operations over wheels of Theory Colombiane (52) Printlericky 105-2851.
- 22 August Continued Styles operations over Pilot fight Seatched for summer built of Wageto.
- 22 24 August Conducted divide operations wate pagetor.
- 25 August Completed diving operations over Sageto. Departure for everyaleth with theory ship USS LST 501 th (cm.
- 27 Augus: Arrivet Knajstein Arolf Auctored (NT, Co., 1985 Projulets for Notice Industry
- 28 August Prostedent no keine Island Heges towing Teorgen Ubig USS Buytant (BD-402) to RMan Jailein
- 29 August Anthored Bayrane in Reajustern. Anthored off Ebeyr to cande Reajustic Uniport.

Corrent retained at Kwajalein, as-foring in rowing, Mooring, and shivinging argonis chill it unit for fear Harbos os 2 Recember it securined to avagitatin on 10 Rebraney 1967 and counted servage work on target to ps. Sr 31 July 1941, Current returned to Real Harbor.

#### USS DANSON (APA-79)

form Class (10) Bhalani Atali Archival - Bofery I Dune 4946 Bikhai Atali Archival - Bofery I Dune 4946 Come torather for Sinci BARIS - Henrice Shat AB: E coverige: Reflect BARIS - Menrice Shat AB: E coverige: Reflect BARIS (1.0 km) WMM Such BARIS tovation: 1.275 yerds (1.0 km) WMM Such 19 Agril 1948 avec Kedyliche Atali

Takk Unit and function Reserve transport <u>Oneson</u> was a target writer. Survey CROSARCADE. Us there was evacuated for each shell at served in Transportation Division 97 of TU sizio Networks trype Unit's <u>Davi</u>on carried Geiger comments and solid transmitters for, the first-tool it's Group.

Shat AB. + 11 July 09601

30 June

1115

Crew reacouted to Heighton

3 July

- 2012 (SSC Fileson (Net)-490 Reported a 15re on board Dawige.
- 1148 Apother Fire percent interviews 6, pp. 1 29 A and 1 10 AV.
- \$322 Fire carlinguisticate (Selecterize 6), pp. 1 2518 and 1 Jones;
- (b) Commanding differ Teams A and B bounded to open tarip and take redivitations was verys
- 1920 Datased taked taked

J July

#### 6810 Search and 0 reboarded Oregon

A social density region stated that the exercit could that of the phip was good and that the reduced with was negligible (Reference 2).

- Sher BAKEP (25 Duily, DE25)
- 24 July 8951 - Status Ton of (Newbools, know to Demica) Began.
- () August Come transferred to 0.55 Sectoring- LARA Z/H: Dawson was boarded for 7 brack by a monitor, select members of the ship's company, and a segmentation free for to reason and inspect the ship (enter ence 2).
- 14 Jugust Tophisde Sverage 3.6 8724 thruis (Peter) locke fil
- Th August Dansas branched by their personned to 315: account to preparation for tracing
- 19 August Courd by USS Automat (ATS .46) to Real (alwin Atri)
- 24 August Artived At Respective Atell.
- 28 August Decomplisationed
- J Occober Topolón sverege 0 14 9724 hours (Refer ince T).

#### US<u>S. DELEVER</u> (ARS-29)

Crew Sire, 84 Pixten Atoli Activation 10 June 1946 Bikten Atoli Sesarianet: 20 August 1946 Shat RALE location - 20 mateir 27 mat (50 ca) 8 Phul 64056 invalion - 20 mateir 27 mat 55 Decomposited location - San Francisco Operation II Cagarancet - 20 December 1946 Final Cagarancet - 20 December 1946

- lase units and function <u>Orginary</u> was a salvage ship used as a support ship in TV 2.2.7 (Salvage function lite functions, were salvaging, fire(Salvage functions, and sepals work on dumaged target vessels.
- Shal Agid (1 July, 6400)

30 June 1906 Underway for area putches of Byggon ateaethy with TU , 2 3,

- ) υσμ
  - 5340 Anchored in perth Coy, Syking Aroll
- 2 July 5900 - A party 2011 the obtain in pasta invets the Inversion inversion instant could be beach 9902 - Anchered in Serch 94
  - 1146-1220 Passdont Langert ship USS Critikasion IAPA 171 duri an Inspection
  - 130x 1413 Inspected hatget vessel x800 11. 1442 [Varded togget white 150 1503 Pagewegta 104 241 for an inspection.
  - 1448 1545 Excloquance two fires on generous
    - 1622 Completed Inspection of Persacula

# USS Deliver (ARS-23) 2 July

# USS Deliver (ARS-23)

, 195 5. 195	Svanshared in Secolaria	0949	Underway to tadget whip you congregate (DG-27.1 to inspect and bose it dever if a statement
5 Jano Jano	Shifteet to beach 32.	0091 1405 0025 0145	reginsery. Monised to Co <u>nyrgta</u> s. Juliouway to us <u>iy</u> Naven aku uži to tako ot
6 July 1.76	Sedecess in whatthy of Sider to perform reader activation	0.8	new Galger Interneeping Underway on Catger Vessel 207-1011 te Desert
96.9	APATORNOCIONES (MARCHARES (MERCHA)	.28 106	tropect. Record to LET 1013. Underway to tropect cations versail 017
th July			105
: <b>6</b> .5 2350	Pailed Bud off Bosonetters Colland Mousist to besit 12.	1079 1349	Property on 1971–1955. Underway all thispetts and howe down (Con <u>yn</u> g Park.
12 July		.4:1	▲.engside Congregian.
692) 1245	Pulind with ofs Adrikan Island. And Norwed (SI) Adrikan (SS) Adri	.540	Didwoway to Cut Avery Culand (AC-71) :დ Frankfed krawera (ruw წიტუტებიუ (ი ბოტიუ Caland.
06 (K 221y	Archered Str. Adrivan Briant	1 ' 19	Anthored roar berth 175.
15 anty		)) ;;;i);	
; 170	Underway to child streesages	C)C2 1115	House down Convertian.
1153	Anchored in perch 52.	1013-1240 1223 - 1240	
36 Jr. 8		(713-1758) 1910-1952	Whited down <u>(obytychow</u> w potitute). The boatding party bearded Con <u>yngtos</u>
0741	utderway to perform your ne activities. An benefits gett, so	(407 (470	Covered Larges stup (rs2 Hugiord 100-789) with form
		1420-1436	The boarding party boarded Muglord.
31 JC18		.425 .1450	Spenyed form on Muglard.
0.422.5203	Alfed synget ship VSS (adependence COVL - 225 in shiirang berchs)	1421	Viderway to Anchorogy. Anchored in terrin E.
2004	And housed (in the CHA 2) G.	IND-	Searching toop left Deliver
20.74 2014	Anchused (r. peril) 32	UL Caty	
-		0616	Underway to receive transfer from USS Pal
22 July			myta (ARS[1]-4).
1141	Ordenbergy the period in the filmer duities	2650	Utdetelay to go alongelde talget entp USS Terrestante terresta
, 251	Archoned in beach 36	0925-1336	Pennsylvanis (BB 58) Conducted operations (operations tot spe
23 1-14		C#X1-1:58	character operations (operations into special character operations)
2517	Orderway to peakers revised antivities and shift better.	1416	Anchevred in Derra E.
1658	Anwhored (m. becch, 26).	L Aucust	
SHOP BAKER ()	25 Guly, 08051	0819-0975 09-5-1110	Spinsbel (Desting an St <u>onger)</u> we <u>nt</u> e Inspirited tespet Ship (IT) New Pork (BR) Jes
24 Gally		1035 104/	Messentre i Logni istig USS Nevada (40,761)
: 14+	Codecary for area anyydd arolli, strathau		
25 3319	w165 73 1 2-7.	2 August Céta	Peorbyed boarding party. (New protocoded no success ship Sping Eugen.
1,52	Accounted the bench basy, present adents.	€832 (¢°A	
	-	1,019,1221	Roarding Least Enspected Films Europe
26 july		3245 2428	Washed down Wevade.
(51)	Underway to clear area for the Periatres UNES-021, which was towing target ship officially and the discussion of the second state	1515	Averaged :- Dorin 319.
: 500	USS Hughes (99:410). Record to Serit's (	4	Condersony to constant interfactures
	address for other h	1157	Anchored mean bergh 179.
27, 2515	Bochoted to Pikin!	4-5 Mugust	And pres is Pichni.
20 July		-	
:))0 142;	Towed carged vessed (CT-918 rolls new berug.	• Auguer 0630	Moorest near to be 788 to gath up Solier
. 548	Clearing LCC 318, washing at down to -		Composition and Dye.
1652	dissipate radioattivity. Underway from blougside suf F18.	U\$9, 1745	Antivited in virially of Newerla Profession to vicitity of Respectable USS
: 750	Analyzed mean bests 279	17 <b>-</b> 2	Huntin (00 4.1).
1.1.14		.105 (155	assfed down Mustin.
29 July		1255	Laying to from Mussin to enchor in vi
C600	Rearding teem abound.		clotty
2805	Enderway to LCT 0.8.	1.458	Anchored in Gerth 165-
0260	moosed so 107 818 to Inspect and hour	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	Orderway to Mustin Lo Has's it down
	dawa .	1551 (22)	Magdamah Kipart Mor <u>s</u> táti météti szálématéset

# <u>USS Deliver</u> (ARS-23) 7 August

2773	hereeneded an accordined anchorage.	Simpofi G.
1727	And Normal Dis Perify 12, 00x151	1920
3 August		1020-10. 1020-10.
0.0046.01	Goodwarway to visionary of USS_MONALISA	1047 [!
	(AF /) to pick up working party, then	1145
	proteeded to Personale.	1241-15
F115	Completed washing down Pensacola.	1530
1125	Anchored in berin 117, Bitsel.	
1214	Subjied to bein 32 siken). LCT 1186 come alongside to detter: Soller	1670 LODU
	Ferpound	
1565	ICT-1186 departed.	20 August
		0762
4 August 0515	Officilies of Stip Naterial (DSM: boarding	¢157
4317	than came abourd.	1010
0430	Proceeded to target only usy friege (as-	
	403)	
5090	Noored searboard side to fr <u>ippe</u> in put	1014
0902 0952	Doerwing Lees aboerd. Will have they again up. Talana	1078
0917	054 boat Ging Least on Trippe. Understay to jobryonderse.	12:2
1005 2210	Cost \$ noot improved thed oper at long.	
1120	Anchored in byild 198, Bitter,	
1748	Underway to committee operations	29 Juiçout
1420	moored starboard side to independence to	
5420 354 ·	put ISA Prioriting them aboard. OSH boarding them aboard independence.	22 August
1547	Undermay to target shap uss Diacter (APA	(175
	64)	
1555	Reacted Stardagerd alde to leggineer to put	21 Acapust
.000 862D	ficanding lear stoard. Eta boarding telm stoard finanken.	24 Marchine
1620	Underway (n. gastgned upphorpage	0527
1005	Anchered in Swith 32, Bikin1	
		0750-53
II Andust		
100) 1052	Underway ap reariseve driftaing taits Apphored in terrib 32, Bikang.	1150
1474	Constant of Carton 23. Breakly.	25 803568
12 Kagent		9747-11
1605	Underway to victority of tanget submerflow	
3176	USS Skare (SS-)651. An house deer Skare.	1120.00
1110-1225	Fontioned unspecified operations.	L139 \$2
1228	Underway to vacinity of target subwritte	1725
	1225 Parteline (321-324)	
\$300  330	Combarted Cospectfied operations, then	20 Bugust
1957	prorevent to Skare. Attived by abonatty of Ska <u>re</u> and constra	0520 0645
1127	und operations.	11863
1418	Ceause operations and proceeded to earget	-
	schwarine USS_Scasgaver Tus 1961	0955
3435 1540	Arrived Sear Searcorn	10.75
1545	Proc <b>eec</b> ed to P <u>ar</u> ghe Antived near Parche.	1190
TALE	impleted operations and proceeded to	1245
	assigned anchorage.	1270
\$636	Anchored in Secto 32, Bikint	1366
13 August		1115
RC()	OndPaway to vicinity of USS Rockingham	2) August
	TAPA 2.9)	6130
1003 1771	Moored to <u>Hust</u> in to pump water from	1000
	bolser (005%)	14(4
L 156	Acchains to Derth 32, Bixto:	1415
14-17 Augus;	Anchored to Disjng	1444
		2-14
L8 Mugane		78 29 Aug
1059	After taking on teel and water, atchnied - te beste wêre otking	
	to becch 108-A. Alkint.	

1	Atter	Lak ( rog -	φ <b>n</b> ,	16eJ	400	Mater:	anche:ed
	in ber	40 LQ8-	٨	Alkär	11.		

-9 Acquist	
1650	Didenway to New York
09)4-0255	Report to Now York.
1050 1053	Mooted to Fennsy2vanla.
1047 1117	Rooted in Entrant With USS Shack (US: 476)
5145	Laying to be vicinity of Nevada.
1241 1519	Regried to <u>Nev</u> eda
1530	Standing riest to assist UN <u>SE Preser</u> vet
	(AF3 8) with Nevada.
:470	Proceeded to assigned anthorage.
1050	Apphones in beach 198 A.
20 August	
0142	Generatively to take target ship this Brisson
	(APA 65) 14 LOW.
¢157	Any notived in porch 202, Bikins,
1010	Ecur-pan working party reported on
	bould for anche: at Avaialy in for Bris-
	cor.
1014	
	Underway. Kanada and another that take well-sup an
10.10	Angeneric and prepared to take <u>Arb</u> eure on
	10 <b>-</b>
12:2	underway for Kwajašein wirh Briscov in
	Com.
29 Juigout	En coule to Keajainin with Balagne in
	5 (m/.
22 August	
(105	Nachatea II Kwajalean,
	-
21 Accpuge	No fores of Residents.
24 heapone	
0527	Casherway Pis Analist in Dilights in Page
	sytvania.
0750-5330	• • • • • • • • • • • • • • • • • • • •
Q7361314Q	NSC)sted kerns <u>vi</u> ogeta is anchornav in . Nortelatu anos
	Kwajalejn Mjolć.
1150	Anchored in berth # 16. Weelatein
25 August	
9242-1117	Assisted 0.75 Chickosae (ATE 23) in cowing
	tanget ship USS Galt Luke <u>Ci</u> ry (CA-35)
	through Awajalein Pass to Aschorage Area.
1139 \$210	Hoojed to peoply hypothe to discharge
	Chevroles pump.
1725	Anomaeod in berch & 14. Awajalein.
	· · · · · · · · · · · · · · · · · · ·
20 Marcust	
0520	underway to assist Preserver with the
DEAS	Persond the life to their of Peopacola
11842	Int go the to Penagola, they proceeded
	to assigned anchorage.
0955	Auchored in berch A-14. Manjajein
1075	Generative to accurate Mechanics in Modeling
1130	Folguender. Noorvaling passaide of <u>Grittwe</u> der.
	Service and the service of the service design of the service of th
1235	Cash of: from slongslow (rin)ender-
1210	Reared portation so Bealgines.
1366	Undermay to assistened anchocard
1115	Anchored in Berch & 14. Meajal+in.
20 August	
0638	Underway to assist with Endependence.
1000	Pauged the write to independence.
14(4	Anciested Independence.
1415	Les qui ton 15he Sson Shdependerke and
	proceeded to assigned anchorage.
1444	Anchored in berth Arth. Kwajalejn
28 29 August	Abchored in Key electo

## USS Deliver (ARS-23)

## <u>USS Dentuda</u> (SS-335)

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	and the state and to set a	U.S. Maria	1. N. J. A. 1998.
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290 5	Tenteuda eus singed		Second The second se
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was contoried. The evention was 0.00 H/24. abues 0.12 R/24 hours below decks, tak 5 April 2 III P724 Services The Server Line Care da la sealed the hoat and departed (Wefertundes) Claud: 575.

peters is and it angust boarding reasy were abound persuch. The simes of their arrival aboard and departure that the past are lasted below

1 Stree	As a Swall	Departure	Telef
6 ALMANKS	f90:	1500	6.P
5 August	6935	1539	6.1
a August	124%	1635	8, 8
/ August	3900	162%	5.8
A August	2215	1635	a.6
Q Asagast	09.5	1615	8.P.C
SC August	6956	1615	5.8
11 Nogans	680.2	11/41	Ei+fl:RC1Aun
12 August	68.:	1545	8,8.C
La Alzjost	400.00		N.P.C

4 August

- 0930 Feeto A and 5 located and locationed reperiod tol cheaning.
- 1045 Pump and pumpied day incompared reactions various panels and morans and associated uncertained equipment for seeaspect other calewater flooding. The confide imposide His agent scrubbed down in something, the wooder, decking in the size gun platform was ripped up and shreen eventeeing. The peral deck was then given another porchbing, the common dropped to 0.8 pc24 Land. The sensage seading for the day was 0 12 Mild south (Reference 4) :56e. Bost sealed and all personnel evaluated

#### 5 August

- 06.90 Text% A us J 9 bearded and continued reprices and coverlage .550
- Next ambed and all presament evacuated Scrubbbing with conclusion, Average reading 0.25 Brief hours implemented to

### 5 August

- Special team boarded beau to astist was 0.10 The setting of the term of the transition of transition of the tr 0"56
- 0.751 Underway in row for submarine modeling 414.5
- 0940 Renned in subarries and ing buoy No. 4.
- 0945 Preserver underway time slongslide feels a aid 0 recorded and continued 1045
- rejecti mork. 1615 All personnel evacuated. Average readory
  - G 74 B/24 Desire (Reference 4)

A., 69, 51, 5
09JG

- Ream- & and & reported to contone je pala wirt 1015-1045 Patraned assumption.
  - .015 Search & and 9 sected built and events of Average (Avelow) 0 15 8/26 Mours (Refer ence 4).
- 8 ASSAULT
  - 9945 Types & and B. Februarde-1 and continues on part work.
  - 150% Team; A 310 H Knoled boar and evacuated. Average reading 0.17 6724 Dears (Refer wigh 45. One source plates that there als

dad dos coaco solocardo uniti 9 August (Reference 4), however, Anothes source (Lates Decords Detger conducts below (2319 colerance, This bas been reported to Raduate for theat chearance to people tions to soon alreaded. Generates all's

9 August

- Liew was tradifierent lear Battimeau to remained Large' whip 122; Piblicare (APA DLBC 236.
- 0915 Teses A. P. and C reboarded Densuda to cost trace peptide search.
- Teams A. B. and C departed leaving abound 1515 a special decast of the efficer and tour entituted even.
- 1.706 special density weaked boat and evacuated Resimption Gelger reading 0.01 0/24 hours Recommended price power aboard when one steel by Raduate systematic (0)

3 August

- 24.60 teams 2 and 5 rebearded to continue repath work.
- :615 Teams 4 and 3 sealed boat and everysted: tertiget residengs befor wastering daller suberance.

Charles and

- electrician working party with two offió9an cers boarded to continue electrical ce Fold Ford
- .542 Benking paray sealed total and evacuated V2 Augusti
  - **ð**81 + Teams A. H. and C. (shoulded to nont) run sepata which.

they upplied hoat and executively 2545

13 August ۇر ئۇ

Tester 4. B. and C subparied to continue repaid work.

- 320 Reprint parts)de la jo<u>l</u>tag.

- er ag Sitters and crew besched and messed aboatil Falligh wath daty section aboatd. chilp of all class. Mariness Colliger conding about Descuda was 0.07 #726 https://www. (flather was cheated by Recenter, although the bout was not cleared for come to ever abound (Pr(orunde 10))
- 14 August

Reprint Stations & Light to Fulton

17 Roquis 1255 (1)32 Sydiological important pirty star along and inspected officers and speed Rices. my have returned to live aloard bestada. hat log does not specify total.

Accust 1010 1045 tacque sobiastime USS parcher C/S 1541 1100933/40

- 21 August 1020 1150 Materied boat.
- 22 Jungurst <u>0</u>921 Underseave on course on Pealetein Ne conserve With Farger Presels Stilmate, 165 Conyog has the Dill, Time Perchas and Seergram,

a 306 Underway from allongside Fullion. . 451

### USS Dentuda (SS-335)

### USS Enoree (AO-69)

- August 111/ Recred to Jugg so beach 28, anthorage A. Kentoleth. Many of the Taria in Parally 28 toogen. Keyla 1225 lein. 26 Kajust
- 2652 Codes on Sor Pearl Ration.
- September 2852 Rentwed Pearly Barters
- Corobes Arrived at Hake Inland Keval Shipyerd.

#### USS 0101E (AD-14)

Crew Stue - HTH STATES ALC: ACCIVATE 24 May 1946 Shuth Alon ( Generiume) - 25 August 1546 Shut Abis ( Generium) - 22 Anni (45 August 1646 Shut BAKER Location - 12 Anni (32 An) E Constantion incation Sas Francessa Constantional Classances - 7 Detaber 1946 I knall Clearance - 39 72 Sovember 1946

last unit and lumition Claime, a destroyed tonder, was a support only in TO 1.8.1 (Repair and Service Unit). Its function was to provide repair and ether services to wany ships during the operation.

SHEU ARIS (1 July, CRO):

- J1 Chine Underway for area outside the harbor steading with USB Benevoleting (Art-1):  $u_{\rm SB}^{\rm SD}$  Sound (A't-2), and other weights. 1554
- i sheky 1709 Kniened atkind Lagooa. 1321 Anchared to beeth 269, Etkins Atell,
- 2 July 1035 changed anchorage to beach MMT.

S#51 8#⊈FW :25 July, 2831-

- 24 1515 154A Codecates for peo(tion activity of atal).
- 25 29 2615 Scened 31 500.
- 30 July 31.6 broused the Jacobs and anchored in Secth-191

Anchored in besud 155.

- 2 AUGUSS 1536
- 7 Noruss
- 2618 Ancienced in Section 1911.
- 14 August 0847
- Anchored in Derrit 17 58.
- 15 August. 1647 Juderway for Wwajaleth Aloil.
- 20 Accuss!
- Anchored at Kwajalein. 091C
- September: 1613 Deported Rehimiter Cor Deatl Earbort

#### 65-36) (A65-3)

Crew Store - AC Abetek Agent Archidter - 3 August 1946 Richer Aboli Departure: 14 September 1948 Location for Smoth SLE - Pearl harbor Ecoulian for Shall BAKER. En raule from Pear' Harber to Kuaja ekt Atoli Cecontumination Localiton: Los Ante es Operational Cleanince. IE December 1986 Final Cleaning: In Jacuary 940

Purchion.

- puttion was a surveying ship. Its protions were to turvey the pusheble offects of the assert home. on tich and wildlife and to conduct an octano graphic survey on onean character in and extrand the aloit area to determine their matacteristics.
- See: #9.5 (1.001), 09021

puttor, was manied its heart marbor for shot APLE.

- 22. 649 1357 underway from Possi Harbor to Marshaut ta landa.
- SPOC @#459 (25 2015) 09051

Cutton was go regim to swajalego Atoj, durjo, shu; MAK-W.

3 August **6**640 Anchored at Blairt Acol. in Open Peats 14 August 1445 Underway to shift berrhs. Anchoued in posite 2018. . 452

- 18 Jugust 1100 Anchored to bear's 2514
- 22 August 9929. Abchared in Berth 2011
- 26 August 16:5 Anchored in Open Roads.

21 August Goderway to conduct purkey southing oper 3650 at tons .

- 12 August Conducted survey storiding operations.
- 1.7 September Conducted curvey counding operations.
- September: Confuged survey operations.

14 September Departed for Respiret. Modif. 3614

15 September 2055 Arrived at Keelelein.

- 2: Seprember: 3025
  - Departod Reajatein for Pearl Paroor.

### US<u>S (MORE</u> (AD-69)

Crew Shaen 152 Biblin' Atoli Arrival - Bebore - July 1946 Sikiri Atol' Doparjure, 24 August 1946 Shot ABLE outlines. Anchored at twage rin Ato"

Or constraining \$	otathon, 17 mmr (37 km) 1 100 turathon - San iran Nysy Channansa - 3 December 1945	Lina Stre	355 ETLAM (AN-19)
lati 9511 an Rigium Vice Up		Bizin: Açobi Bizin: Açobi Shat ABLE Le Shat BAKER L Deconiaminaj	Arrisgi: I April 1945 Departure 27 August 1945 cation 25 mmt (27 amt) 5 pourfagation: Poppi Summi Charange, 10 December 1945
Shipt #6(F) (1	Ju", 0900)		nce. 21 December 1945
	ncheted at Newlatein Atoly Lot shot AB.E.		as a net trying sulp in TV 1.2.7 (Salvage
4 Jaly 97%	Australia at Mikimi and anchored in Bouth 365.	diray d	tis functions were to place buyys and rat- gents to thele proper planes to the target and atter the deconations to place hoardbog a the target vestels.
	eriod between theis ANCK and BANER, Enorey to many rask forro ships.	SPOL ABLY (*	Jely, Giash
14 July 2922	Separtvé Sikini for Kwajalein Atosi.	1100 79 Jane	Underway to have position for ABLE in Area Mecoury.
14 July 1772	Acrived of Respects On Acort.	J July	
10 2039	Departed Besjalein for Bikhol Acoll.	:340 534)	Proceeding on dury assigned by CTU 1.2.7. Alongside target vousel LCI 529 [sta]: placed a boarding party aboard.
ץ שי יו ז≤10	Assived as BIMINE Asels, anchesed in Justin 305	1942 9404 2412 1412-1445	Underway to target wensel (F) 329 Aloniside (CJ 129) Didetway to taiget wensel (C) 329, Alangside (F)-127,
24 July 1507	Underway from Makini Cagaci.	: 400	Anchered in vicinity of same: ship USS LST 100: boatcing party left in small boat.
Shor BARIP (	75 July, (1835)	1526 1545 164 i	Branding party returned on board-
24 July	Steading with 035 (Smith GAD 14)	resh	USS 98t): Providing this placed assord. Underway for carges whip <u>US</u> S U <u>ST 270</u> .
30 2419 0729	Anciented in Hersh 205, Bikshil.	6705 1768 1714	Leying to in viciality of EST 220. Dispancied boarding party and boar for EST 220, togo dist not board.
2 August 1725	Shafted to perch thee	£7!5 4720-174)	Pispatened Abas to target ship (55-157- 545)
24 Avgust 2437	Descendent dass Mandalation Berley	1:42	Team placed abound LOT <u>1995</u> Lett LST 545 for NST-223 for Allompt bearding.
25 200001	Departed for Keajalein Acubi.	1155	itearching pecty retained about the dad cear- locard 197 220.
1035	Arriveć Kwajaleło	£535	Anchored in Secth H. Bikini.
31 August 0800	Departed for Encyctak.	وينو مالين (	Underway for complete inspection of ta: Not vessels
3 September	Underway Ev: Weatateln.	C/40-0751	Flaced there on thinger subearing US <u>S Tu</u> ne (\$\$ 200).
<ul> <li>September;</li> </ul>	Acrived at Kwajalein	0605 0579	Placed ream on Cardos Submathme 157 Date submathme
7 September	Landersway For Golag Perrong with APL (Gran Messail that did por participate on CROSS Homical to the	68%9 08%4 68%9 09%4	Flored (pair on board target public to \$32 Searceen (SS-196) Placed test on board target while \$55 (ST-
20 Sept <del>etb</del> er		1017-10%	foll by shans of a small toal Placed tobs aboard races (propiles 15th)
105;	Actived at Phase Maxbox and econed at Fuel CLL Physic address castony of a row.	1056-1824	by means of a small boat. Placed than on board target vessel LCT
23 September	Thice of Engravis small boats were in- spected by radgete imprementatives; all three downo were declared satislingically sate for concernor.	6191 941 119 5761	874 Miaced seem aboard target verset (71-332 Vederwey for 30een Island, Reckored near Eney Island,

323

sate for operation.

## USS Ellan (AN-79)

## USS Ellah (AN-79)

), лау 793)	SAjgled aptropayer, archoired in berth M. Bikin'	1745 5320 2342 1470 1715	Alfaqside Scalave). Machael to Cilwes. Anchered in Dersh 244
t Juney		21 July	
3710	Enderway to USS Suncock CON 001.	L320	Underway for USS George Clympic (4.9, 21).
C650 00]:	Engaged in buoy orecollers with Suntact.	100-100	Bound to <u>Styme</u> : Conducted may ing operations on Swatawer.
1210	Underway to USS Oneogal (AM-65)). Runded to Underse.	1230-1330	Arenesed off target ship USS Talgew 100
1956	Underway for 195 Citane INGA 1915.		4931.
1410	HLDIAG 10 DELANG.	1455	Underway,
1513	Underway Los buoy area.	1610 1110	Regard to moothly operations as target
1514-(669	Report to proof a chaged to scienthing		someternen USS Skopjerk (35 14€). Normanista internetien (405, 48)
1111	chird leg and year through to Dittant.	1(7) (1815-1975	Record to use Conserver (ASS-39). Provid to apenalizous un Skäpjach.
1410	Kasted to Strawa An Marced in Overnight berth.	1910	Hoesed to Conservet.
1410		2023 2045	ingaging in operations on Staggers
6 Juny		2205	Mooned to USS Preserver (MC-8).
û rêg	Bodynway for budy Area to applyt Cancook	224.5	Millie runging a 10 ion author off a per-
	whith whore		maily subscripts subscripts another should and
00/0 0935	Magywd (o <u>Sun</u> gaek. Ynderwny far Offiawa		tan's second etch argent, thereader and
1000 1744	Moored to 21 tan-2	2245 2300	Moored to Tung.
1000-1414	Record to budy Bt ungaged in operations	2.40-2345	Meeted to Turd.
1420-1575	Booston to Differen		
1140 1840	Moored to Suncert.	24 Daty	Throughout overly marging engaged in oper- ations on Tunes.
196> 2065 2008	rkonred to Outawa Arrinered Le overnight berth	11:5	255arding team on laterd Tugal
2000	a chered at over injet beter	2515	Codestway to Seasaven.
9 1449		75.40	Moored to Seataven
09-30 1903	moored to Suntach, completed operations		
10:5-1120	Recred to Ottawa	Sent Reven (5	S (aly, 0835)
1556-1352	reacted to Chargest completed exerting Open attacks	29 201V	
1000 1000	Modered to Octawa	GIUD	Deducary to antikarage
)5#3 (67D	Macjed to Sunrack: completed noorlaft up	CBID	Undersway out of tagood
	wist 100x	OBG6	En dermation with GTU \$-2 %
1591-1(15	Noored in <u>Celgue</u> .	1123	Archested in the of Energiastane (norsegneets)the Team about the Philemeny
:172	Manieri 206 yardı (18) meteryi Vermati of Gilana	-700	preceding to Unique ship USS Magaza (uni 87)
70 July		1249-1325	Revera ta Nag <u>ara</u> .
0650 0745	Reprind to Subgook: moorhing operations	1325	Underway proceeding to target ship USS
0825-0930	NoorAd to C <u>ile</u> wa. Conducted Eacy reministrany off Frack (Sr.	1340 1950	Cethera (APA 85) Manager (L. Getarda)
1012 1010	land.	1400-1435	Honred to target slop ass pladen GPA
2355	Anchoned in Desils 87. Biking.		63).
		1425	Underway for special encourage.
En July		1455	Boarding operations completed. Instru- regulation Dead betarrand to USS Kerneth
1523-1250 1565	Alonyside Oltawa. Completed operations		Milling (AV 14).
1423	Anchoted.	1500	Anchored to berth Disord, (41410)
-			-
13 July	······	JA July	Dedorway [as evented wirky.
0910 0910	Movend to USS Mol <u>et</u> iv (MM 991. Movend to USS Honelico (MPA-S7)-	0910 1020-3050	Meaning the sources within aperations.
0945-1430 1265	Anchet 61.	124':	Anchored off Bhalak to pick up heav for
			soor ing
1) July		1475	Anchored off concluding [s]and to take buoy
1440	Underway for monting operations of carger	1.6300	up to anchor Next the second conductive is an bound
	Vessel ARDC II Completed appliations on APDC-13, provined	1500	<ul> <li>Monoting completed, underseny to ancho: Apr in besth Queen, Knew Toland.</li> </ul>
1810	ing to bsc ceby (ARC+6).	1510	Appended in beeth Queen.
Le 90	Houred to Cela	Leval.	Anethicad off Decth 390.
PT JULY		29 JEDY CAOS 1410	Underway to perform exercitives for the
0650 0140	Underway to peritical for mooting chairs - Housed portside to Kenglow	Chub 1410	structury to percent operations for the
1010	Hosting for Carde in Anny first	1500	Practing them discharged
1013 1140	Housed to Uttime.	1508	Accused in assigned berch.
10.50	Anebored.	10 10 20	
		10 JU1v 10:20-1330	Engliged to operations to langer army to
γ142 55 Π251	non-way for Sectory.	10.01770	salvage underwater und umendes
17.50			

### U<u>SS Etlah</u> (AN-79) 30 July

## USS Fall River (CA-131)

1528	Analysis in betty y	025	Anchory# In Decc# 90 Bitle1
A Awayst		19 Nospect	
0855 1525	Engaged in operations or instrument busy tecovery.	0w0)	Australian Swith 94. Bibley.
12)6	Anatorial could of porth 760, Miklos.	24 Regard (0855 re145	Allongslör Hallory, pluseching with opera-
7 August			tions to haist anchor.
0620	Inderway to pick ap boarding team and mate assigned which in array.	(40)	Accepted by PORTON ACOUNT DO DEPEN 94.
0920-0955	Alongsing the get into the state (a) (0) (0).	25 Kingunt	
	teas aboard.	0953-3000	Alongside racyel will use Mayrant (10
16.5 (20)	Alongside Trappe, team ubsaid		402), conversed booking up row line.
1350 1595	Azongsi Geli Akigeli shapi GSS Blanner (ABA 601.	լուս	- Undersonγ with Ma <u>γr</u> aµt in toar ton Awaja Tietn.
1926	Atter taking on fuel and water, anchored		
	in vicinity of grey lations.	78 MLAUNT G725	Simples in shift iss to USS Cuterni 1865
E August 0671	hearding room 7 about	9970	22) Rođensky filovovepany mitih (optimenti
A900 092	Allongside larger ship U <u>B katon</u> Taibou (20.346).	1000	Atomysice Mayrant: placed boarding part aboatd to adjust rudder angle.
V945-1072	Alongside target ship USS Mishd (DD-404).	1545	Party aboatd, proceeding as before,
3027-F23 <b>0</b>	Alonyside Lether ship Uss Milson LDD		
1170-1150	4051 Bionnelia carone abie (55 Ge, in 1808 AF)	1300 29 August	Incharged to Backly & Kustalate
1242	Alongside target thip is's Stude (APA 61). Metadaed bustling to while to Dominimation	1306	Anchozed in Berlin A. Kwajalein.
	(10-7)	2 September	
185*	ancho; eg.	(25)	Leit Kezieleba dun Pearl Harbut.
12 August		32 Seytembers	
6720	Underway don baby operations	0604	An twee Pearl Parkers
3465	Laying to bear USS Neven the 121 to pick - up meniators.		
0941	Remission . Remission description proceeding to remier . affär:		US <u>S FALL ABNER</u> (CA.137)
1125	Moosed to buoy for pumping.	Lines Silve	81 '
1435-1525	Engaged to challow diving operations.		Arrivel. 27 May 1946
1920 1971	Englaged to shall be diving operations.	Binhai Atoli Deskizy≺e: 4 September 1945 Shol Abil Localaca – 48 mmi (22 tal 500	
1540 1605	Underway ta Lonase Nunken haoy. Avanased:		ocation - 12 Amil (22 Amil 60) ocation - 12 Amil (22 km) (5)
			ion Cotalian: Los Angeles
() Applica			Clearance 23 December 1346
0985	Underway og repakt budy	Pipal Cleara	ore. 27 Sejember 1946
LGOD 1535	Started operations to areal, woorbog budy:	1464 Chill an	d tud: 110c
1612	Anchored in betth 7.		around, an avy coniser fall Rive: re:ved as flagshi
			1.7 (Target Wrsser Group) () supporte
4 August		stall o	embers before and during the operation.
1200-1630 1200	Sugaged in cruspectfied operations. Anchored	Sant Atl( 1)	Ju' 7, 6900)
IN Assault		1 b	
C801	Undermany we assigned duty in tanget area.	a sloty onze	Dedecarry for operating area such ide o
6845 1155	Moored to sarger ship USS Bracken (ARA-		the lageon.
	641.	1,20,2	intered the normal and anchored to berr
1110-1203	Romand to post bow of Energy's with 1955 Reconside 1892-850		185. Puntal Leat
1206	Anchesed.	2 July	
		1141	shifted to beech 91.
16 ≜ogast 0/40	Industry as particular decisions. In a second	b 14	Freedom and Anna Anna Anna Anna Anna Anna Anna
0740	indexway to assist destroyed in rational arches	J 18 July	Anchoiced The Eventh 91.
0601 U915 09.16	Moored to <u>elison</u> .	Smol EARFE L	75 Auly, 6875)
04.10	Alongstife GatrionAde. Uninitalizing air power to clear fouled archod.	25 JULY	
1945	Underway to USS Newser (Add (21)).	0577	Underways for operating area activities a
1430 1445	laving to to victority of leves to place		the Lagoon
1505	up forlynt. Archaned i'r brech 50, Bheini	2106	Anchored in beach 366.
	nan sakea on Lendon so, Macini	26 29 July	Anathorized in Section 306.
7 Augurat 0055 1115	Simonalifa Castonada en Auentek sudditera		
V812 1112	Alongside Gool <u>stade</u> to faction actiliary power to them found gather		

# USS Fall River (CA-131)

# USS Fallon (APA-81)

78 DVIY 1530	briderway for ervs 2 (ms (1.3 ke) off	1 Doly (907	Files were reported aboard ship (Refer-
	entiance of acol1.		ence 5. p. 1-11-A).
29 iuliy		2 July	
13:9	Anchared in Serie 386, 817151 ALOIL.	0925	Fa <u>llar</u> reported Genger sweer.
		4545	hearding team A. the commoding offices.
15 July 0922	Shifted anchorses to basis' 31		a redictorized motions, and its enlisted
0927	Shifted anoberage to brigh 91	3824	men came on heard so inspect the ship. Team 5, consisting of three offices and
11 Juny 1 Aug	ura l		twenty-two employed per, came about d.
	Anchored in Berls 91.	172)	Failor declared radialogically sale. The
			remainder of the teams required to fail-
2 August			ίση.
1415	Shifted to beith 359	1730	Them C. rendering of two officers and injecty collisied men, came atuand
16 August		.922	Team D. consisting of 35 enlisted act.
1011	Separted for Respirate Anoli		case aboard
1 J August	hand and the brand Mill More Ballary	4 July	
083/ 1675	Aschored in Berth K 11. Keajalein. Departed for Biblint.	0450	The CROSSROUG Crommance Disposal Office: name abound.
,	selected the second		104 C (10 C)
18 Asepast		5 (D Galy	Moored in Derth 200.
QALL.	Anchested in berch 56, Bikini Acoll,		
		tt dage	Shilled to becch 201.
25 August ,701	Separted for Residing Anoli.	2424	SALES AS SECTION.
	selection for the Musica state.	Shu: BAKEN (2	5 July, 0815;
26 August			• • •
\$442	Anchored to bench K (). Assigned to	34 Daily	
		1300	All personnel had been evacuated to
32 Xuqusi 1718	aeli for Hikini.		Bexar.
		26 July	
1 September		1906	A reading of 4 K/24 hours on Failing
6-205	Reterned to Bauint.		reported by USS_Proserver (ARS-8) (Ref-
4 September			erence 6. p. [-]7-R) <u>Preserve;</u> was con- ducting radio.cginal surveys of water in
1155	Lett for wajalwir Arcit.		the area.
S September		27 Duly	
96C3	Abstwored in berth Roll, Awajaleth	CR55	<pre>// set a 1 hour tolerance leve).</pre>
V September		Fu30-1120	- Dreparating officer, engineering officer, and DSM inspected ship.
1.22	Unitednay EDS Peach Mailet.	2416	heached to prevent staring theference 6.
-			p. 11(7-0) Reference 5, p. D 24).
14 September	Here is a set to set to		
1012	Moosed at Avarl Hasnos.	.3 21 August	Boarded on 13, 15, 18, 19, 18, etc. 2) August: Codemittee of Scanding party
			columnation of the second
	J <u>SS FALLON (APA-01)</u>		
		22 August	
	27 Arrausis - 20 May 1946	[1:0-04)0	
	Arriva': 28 May 1946 Decarture: ' Sectomer 1946		puntes -
	1 tor Shot 48.1 - USS Bewar 1444 737;	2) Jugast	Ship's crew left for Kwajatein
Crew becaulion	Ter shot SAFER: EPra-	E900-1100	Salwage party boarded to complete trigging
	alten 1.)50 yards (1.2 km; 54		sajunge pompe.
	icalitan — 540 yerds (494 metern) New - 1948 meter Keujahein éta''	25 August	
Jank To Parch	· ·····	27 Muqusi 2425	USS Clamp (Ads-11) towed ship to mosting
LASE UPSE AND	Auto ! for		bury for further walvage work.
	an attack transport. Wes a forget wessel	(*10-)400	Ship assumed by commanding effice: and
	RECENCEDES. Its crew was evacuated out each -		engineering officer for flooded spaces.
	t derved in franspargarian Mix(#165 9) of . S Merchany Type Units.	26 August	
		1102	Companding officer and engineering offi-
Shat ABLE 43	1017, CAND+		cat fotutted to Separ.
~~ -			Descentive forest
9461 3461	All pressoners and been eveninglish to	26 Radiret	DecosmixsSoned.
1770	New Action of the contraction of the second states and the second	September:	(w)) Difficul for Twengeleyr, Lowed by 050
	-		kecialmer (MRS-42).

3 September	Assived as Amajalein.	1945	Party C returned to Fitimore.
	USS FILLMOPE LAPA-831	27 August	Departed Bikimi for Kwajeletn.
Iran Visar I		21 August	Norived at Kwajabein.
BINNT ALOI Crew Socallor Crew Socallor Smot ABLE Los Smot BARKA Co Drecentableatt	Arriva). [] May 1345 Beparture of August 1946 ) for Shot Balls <u>USS Bartletd</u> (APA 31) ) for Shot PAKER. Guyfletd (alter: 2.43) yards (2.2 km; SSM )callon: 2.47) yards (2.3 km; SSM )callon: 2.077 yards (1.5 km) S )on (o(alter: Eun érancstro	7 August ( 1680 1680	Five redicionates montross boarded to monitos stáp and een. Redicionital senters finished ingentión of ektp: promotheed the shap redicionate relly safe and lett.
	Gearance: By 22 November 1945 nd 24 January 1947, Mortwla, n'rg3n1a	28 August 0820	Departed for West Marbur.
Outing ( each sa:	: Lunction n an attack theruport, was a target vestel CROSSROADS, the crew was evacuated before or <u>CRIIBO</u> PE souwed to Transportation pive of TU I 2.6 (Recchant Type test).	5 September Saute 6 September 1945	Rodred to pies Hill, Dear) Hatter. Dec (adjoing)ca) officers came aboard to clear ship.
Shal MB:L  \ 30 June	July, 8900;	1545	Radiological efficers lets ship, results of the inspection manage.
0000 0000 1000 1000	Céfécers and news evacuated to Bay[[ <u>ald</u> . Alà boalding teamx had departed. The special animal detail departed.	aboard <u>Fill</u> restorted. W	erbes, a cadaafe inspection of small bears one found 11 of these craft had been con- than of these had been received an beard linged (RMA-235) on 9 Augus: 1946
130	Pitimore given radiological cleatance for reboarding.		<u>455 FLU55CR</u> (80-366)
Z July 1249 1503 1529 1535	Reboarding party A with a fadiologifal panitor bearded fillmote. Reboarding party B returned. Reboarding party C embasked. The radiation monitor declared <u>Fillmore</u> sufficiently free of radioattivity to allow complete operation and ouropartan. Monitor departed.	Bikini kiai) Shai Ablë yar Shai Bhith ku Shcanlaminuti Operational (	ide Arthwal – Belgre & July 1946 Departure: - 4 September 1946 rathon: - 18 to 22 mml   33 fo 41 km; S utathon: - Ruajalena 4(6)1 fon Socathon: - Pear: Hanbor Cheargare - By 22 howysoar 1946 her 13 Secember 1946
18 July 19 July	William Day operation was in effect and the tree left trainform. Crow recurred to <u>Pi</u> lb <u>rog</u> e.	1 of 10 10 parts Surveys.	Bivection cover P <u>intson</u> worked in Destroyer Division 1.2 3 Descroyer Uniti, its (unition, were of the sufface area, conduct organizing the sufface area, conduct organizing the sufface area, conduct organizing the sufface area.
	'i Juiy, NAJ4j	Shot ABLE [*	Juli, 0906)
24 July 0913	The officers, crew, and reboarding teams mete eventsized to <u>Bayfilein</u>	20 June 1241 1122	Guidecway for ABLE LOSS. Herebund process to proceed to area Mack.
29 July 2026 1999 2338 2312	Ellimore cleared not returniding. Milwore declared Gelger sweet. The first bostding trade solutions to Mill <u>more iRefection</u> 3. p. p.12; Amilologite: clearence given deference.	ylury 1977	Schaming independently in accordance with CTS 3.1 Op Film L-45, pascolling the Kouth berges of nime mach. Anchored in Decth 142, Miking Atoli,
29 Juley 0825	5, p. D-19). A Section of party A with a cadiological	2 July 0920	Underway to Droken lytand to carry but Operation ivory in competion with radio logical wast dispatch.
	<pre>evolution returned to Filtscore. The Socium left and returned with another conflor at 0540.</pre>	1102 1105	tradered instar while boat all Groben Island Party #sbacked in while boar to go to
0955 1750	The deplote tetuceed. Receiver of party A with party & came - encard.	1988	Oroken Island. Completed Operation Swoty: Motor whole boat returned with Sanding party.
1155	Reputrate deviated fittacte sate except for four ereas of the ship.	1910 1551	Prineeded Arca Groten Island to Biking. Anthored in Seath IIC, Bikini,
1270	The monitors reboarded.	1559	Nonservice of the Antipingical unit returned to USS <u>Naven</u> (AR 12).

USS Flusser (00-368)

## USS Flusser (DD-368)

# US<u>S\_flusser</u> (00-368)

6 July Con	Padaanaa Baabba baa baabaa Poolaa	21 July	
1944	Underway from betth for Harber Entrance	10:7	Mustre to USS 157 881. Kmajstein.
	Control Vessel (NEGV) duty:	11.5	Underway from Peepelein to Bikloi.
1020	Relieved 1935 Aller K. Summary (175-692) of		
	PECV ducy.	20 July	
1007	Anythered to Deeth 2Re. Hiklini.	07%5	And Noted in Serie 3. Shills
		1756	Underway for Awajalaka from Bikina.
13 July			
14'0	Underway for Brith (165) Newlog Seen re-	29 14.9	
14-0			K. (K. J. ) = (1.1)
	Herved of HERV duty by US statest K.	0935	Rechtored to pects MIG, Knejaleis.
	Rundlington (C.3-1613)	(76)	Underway for Bikant Apoli.
1551	Anonyted in perch (ICS, Bixin).		
		ЗШ ССКУ	
14 July		0912	Anchored in 21%101 Min]; bench 1144.
2524	Otherway to Operate as station debicinger	2525	Denty-three entities U.S. Harine Corps
	for shot DAKER.		passengets left the ship.
13.3	Anchored in Death 1165, Bikiet,		•
		2 4:33403	
15 39(y		1010	Anchored in Series 319 North, Hikins
1079	Kelhoved Hunitograp, as HBCV.	2020	ARCHORED IN AFTER ANY POLINE BREAK
10.5	Nocholed in Secth 18t, Sikini,	5 August	
		2752	Resteved minitingion as REM.
L: July		0753	An layed in Berth VII (or . Pistal.
0220	Secures as PETM		
1903	In station at Foline Zebes.	7 Augus:	
1930	Reviewa dantes wa where.	.613	Anothered to Empire REG. Ristol, to extend
į ?O)	Another at in beath 200. Histol.		Sight visual computing the with poor dis-
			rector aboutd USS Houni McKincey (ACC-1)
15 July			receipt about a pass evant performer about of
1145	Balanced of LNDs 4 and 5. Summer, and annual		
1143	Relneved of HERV duty by Supper: underway	R Acquot	
	to approach reasby anchorage	- 192	Relieved of dary as 1480% by 2005 lowery
L 204	Anchaired in beach bear PRAV.		(00 / 20).
(3D4	Creationary Col BARSP Followings).	2431	Action percepting, environed on percent light
			[s] t [n]
10 August			
( 655	Ancheoryd in Asiat 2004 - Pittini.	() Arigus!	
		5722	Apphored in Netth 366, Bikint
20 0619		0710	sellered there it while dury.
.515	Probably to be a set of the set of the	0710	Netterand Time A na Nativ Forda
	Anthree in besid 189, Bikint.	N 10 10 10	
		. A kugue i	
71 JULY		15.54	Anchored in becch 259, bikist.
(530 Jazy	engaged to extract y patitions of mole to	1600	Reflected of City as HEAV by Sta Bandstah
	eožjuć 196 <b>m</b>		(AG) 4().
		3642	Archared in Seast 112, Mistal
23 July			
3805	Helseved USS Liftey (100-324) of Rote	14 August	
	d-14.	1164	Accounted in Denth 55%, Bikini,
051;	Acchoired to Sweth 286. Biking.		
·,	HIR, MARTINE THE APPENDE ENDING MICHANIZED	37 August	
24 3619		1400	Alset loading thighdous from USO Diste
1.52	Lodesway from Lett, 1865 co.loved of KKCV		Africkly, methyred retweet legits be and
	dway by Symmetry showl out can Keelalean.		112.
Shas 8445 P (2	5 July, 2915)	. S. Augusia	
	-	2952	Acceleration Sweets 4.1, Hilling.
25 July			
0721	Annabred in boath A29, swajalein.	25 Bugan	
1717	Werd had water slowighting to peril. Asilar	525	Didetway for Reajolate.
1	ered radiological pliks (instruments to	16.12	Respect emethicion (0 pes 1)9 km/ outesde
		10.12	
	measure cadeation), and left immediately.		of Wikins enclance Sunys.
1001	Underway for Bikind.		
		26 AUGUST	
26 July	En joure from magainin to Birgol with	0622	Archored south of berry K-11. Keagelein.
	members of the Joint Chiefs of State		
	Atomic Evaluation Roadd and shelt sides	31 August	
	ar passengers aboard.	2145	Underway from Swajijein in Hiktori.
0721	Anchared in Barth Roger, Right		
58CC	Rembers of seant thicks of Staff Atomic	. 300014-2007	
- Y Y B	Evaluation Brand disembarked.	:904	Anchored in beach 111, Bixial,
<b>090</b> 8	Anyhored in Levin Jyce, Bikins.	×-v1	· · ··································
		/ Kacambar	
1665	Underwhy for Kwajalein with passengers	4 Sectorber 1750	The design of the Research States
	aboard		Chderway for Kwajalwin.

### USS Flusser (00-368)

- 5 Ceptember 1411 - Andratod 10 Denth X-6, Kwajaleju. 9 September 5600 - Underway for Pearl Machor
- .4 September S220 - Reared to perth H 2. Pearl Hajbor.

#### USS INLIGN (AS-11)

Grew Slae (JC) Statum Apoll An Gaal (20 May 1946) Statum Apoll An Gaal (20 May 1946) Shot Able Location (20 MmA 139 Mm) ME Shot SMUR Coration, 14 Mmi (20 Mm) ML Deconturnation Location (25 Mm) ML Deconturnation Location (25 Mm) ML Deconturnation Location (25 Mm) ML Deconturnation (25 Mm) Abut Stearasse, 10 Jac. arg 4947

NASE USAN and Function Patton was a subworking cender 30 70 3.8.7 (Repair and Service Units) its function was no service subbarbarbag, unequal tanget vescols declarg CACSA-ROBES

Shoz ABUL (\* July, O900)

- July Steamed to operations area with USS State (NO 14) during whot ABLE.
   1512 Apphored to barrin 21; Steam Angli
- July Biorgette Larget Subgetters USS PriolEtth 155-3861, USS Secreda (SS-319), USS June (SS 2031, and USS Sectared (SS-319), USS June (Sectarge Creatmates and East.
- 3 .301y
  - This Plastish search alongside to post.
  - 1946 Deptinds accored allongside to pric outboard billes<u>ti</u>sh.
  - 1010 Swataweis and the alteritude to part with Swata of Bentukla.
  - 1043 Tuna coored alongside to port authorsed. Sectangly.

### 5 July

- 1045 Missish got externey free alongside to more publicated of Tung
- 1119 Commerced discharging freshwater to Destuda.
- 1920 Allog(1) at Closed the Appl acceled residenced of Tenal.
- .265 Completed discharging inestwater do Dec. 1929
- 1720 1750 Discharged Pressuure: Lo Swaraven.
- 1253 (312) Discharged freshweter to Tyre.
  - 107 Centeren get underway brue alongside to shife berichs.
     Clot Searages seared accesside to unit. But
  - Seataven neared arongship to port our board of Philotitish, having philited betths.
     1404 Communication (rethware) to tura.
  - 1404 Commenced distribution (reclavate) to Tura. 1412 Contended discharging freshwater to 251aufash.
  - (42) Tompleted (Statesging freshwater to Tune.)
     (443 Completed discharging freshwater to
  - Ellarise.
- 9 JULY 8
  - færget ship JSS sevade (ud) 161 get ordes evy in shift berikn.

### USS fulton (AS-11)

1 Sely 1000 (055 preclarged decour one to Turin. Clacksroed diesei all 10 Phiottish. 1115-1140 convented descharging tresheeter to see-1213 na venera 1270 Commond discharging freshwater to Tuna completed discharging freshwater to Sea-5060 Men. 1245 Completed discharging freshwater to Tube Rischarged diesel fuel oil to Searaven. Cischarged diesel fuel oil to <u>Destuda</u>. 1300-1325 1315-1402 1414 Commenced discharging battery water to pescela . 1005 Commented discharging lubricating million Plitorf sh. complying discharging barbery water to 16.00 Senruda. 8 July 1000-1025 Elschneged backery water to Tune. 1645 completed discharging freenwares to Den-1221 9 July 6935 Tuna untreway from alongoide. Plintfish underway from alcouside. 0~18 1133 Target solutation USS Parking 029 2841 moored alongside to part. 1259 Targer subsarine U<u>SS</u> Apogor (SS 308) weeked alongside to pert outboard to Patche. 1417 Target submarane 128 Skipanck (88-1861 money alongitize to soll outhoast aph-400. 10 July 1011 Skipjark inderway from avony-Sde. 1110 Apogoo underway (rom alongside. 1438 1508 Purped buttory water to Parche. 1525 Patiene unterson find alongs de 11 Zaly ISAN Partow Bridged algorithm to part. 2315 1530 discharged barrery water to Patche. \$415-1511 Discharged Command to Payche. 264 r parche dos uniformay (rea allonguide and anchored of the statboard measure. 12 July réns. Appropriate alongside to port. 1132 Apogon you underway from alongside. Skipjack moores alongalde to part. 1422 1515 Commenced discharging iresheetes to Stip Sayk. :525 Compensed discharging lantery water to Skipjack. 1607 Completed discharging [reshorter to Skip -<u>terk</u>. Completed discharging barrery water to 1765 skipleck. Skipleck get undersway from alongside and 1725 anchored in berth 70b. 13 July 962e Targer subwarthe USS Skare (SS J664 mosted already lde to path 1410 1445 Skiplack eads wrationary trie dive. y tot at 1055 1218 Discharged diese: funl to Skare. 15 July 2023 1220 Discharged bettery water to Skate.

## USS fulton (AS-11)

# <u>USS\_furse</u> (00-882)

ter Teria		Mag. 10	provide support for drone and photographic
0915-1050	Discharged freehealet to Skate.	aperatio	X75.
1452	<u>Stat</u> e underway from alongsine. <u>Stipl</u> ac <u>k</u> moored alongside in port.	Shal ABLE CL	July, 0900;
1651	Skipjack yor underway from alongside.	20 1	
Shot BAR(4 (2 24 July	5 (sky. 0635)	30 June 11:0	Chiderway with <u>USS Saldor</u> (CVE-1114 and <u>USS Newman F (Perry</u> CO0 893: for alter result of Mixten Modil.
1024	Underway lot dies cutside if the legoon. Assacing with D <u>ivie</u> .	4:26 F	Accharged by ports 32.
25 29 July	Remained Chromany costs:SA Lagoon		
30 .NJ(Y D915	Anchored in Berge (3), 61k(es etc)!.	sa unescenaria Sh <u>arentiste</u> is Caunchéas	ion in available abour ins cute as USC (Cv-38) plane quard during alregain
2 Augus: Cito	Rachological safety countil members re- peried on buard for radiatedical deter tion durings. It is not known when they	2 July 1925 5 July	Anchored in berch SC-A. Bikini Acail.
1506	inder. Studentway to whill perite.	0805	Orderway for Avajalein Arall.
1614	Anthonesi in twenty 386	6 July	••
1-6 August	Anchered in betch 386, engaged on routine activities.	0925 17 caly 13 (13)	Anchored at Kwayalein Micil. Unwerway fo: 21kina Micil.
l August		1.11	
6907 1919	Lode-way for beech 231. Aphhored in beech 231.	13 Jaly 36% 1672	Arravel at Batin: Atoli Teit Ritini Atoli fog dir subeassal oper
H 13 August	anchored in beach 20; reactive during.		ations with Saido: and Percy.
13 August 1929	Dentude stood in and traced algorithm to post.	14 Suly 143)	annoaced at beeza 536, Eskins Acult.
		Stot EMSA (J	26 July, 1835)
34 August 1302	the standard conductions of the set of the	14 miles	
13/5	Dentade pederany from etergyter Underway for new beich. Anchoied to berin 92.	24 suly 2930	Enderway for area outside of Lagoon to renderwous with Saidar and Perry.
1500	Destinate mored alongside to porr.	<b>N</b>	
15-70 August	Apphysed to berrh 02. Source antivities.	25 Ju'y 0845	Changed course to matchain plane guard station #2 during flight operations.
20 August	Auroba and undustries from streamble to	1170 1500	Secured from flight operations.
1642	Parche got underway from alongside to pask and stood out.	1942	Sation Journmed two planes. On screening station #2, 7,000 yards.
21-25 August	Apphated to berth 22, couring activities.		lt.h k≞) d∶om Şeidog.
25 405336		26 July 0344	Ersewallen vo Bikini Secil
27 405350 1635	Reparted for Xeajalein Atoli.	0344 0745 0816	Frontweding to Bikini Aroji. <u>Saider</u> jeunched rhoee planes. Laytog an 500 yaade (457 metrik) doom
25 August 0957 1312	kacha;ed in Secch K-j7. Geatelein. Bentugga Stood in shd moored alongsode to	0846 3010	Sald <u>o</u> r. Undermany to plane quard station Wit. Commented Steaming to plane guard wite
	port.	1705 045-1405	tion. Secured from flight operations. Selika: Damared places.
	<u>JSS FURSE (0) 8071</u>	1043 1106	Exceed in Clubr operations.
Crew State - 2		27 2919	
	Anningh - Before 25 June 1946 Anningh - 28 June 1946	Q721	On plane quard sixtion #2.
Shol JS(6 1 2)	Ceparluke: 28 July 1946 Saltor, 30 mmt (66 art) N	3739 0142 0825 0960	Satéor Jaunaned two FOF algorate. Félah: contarions.
	Cather: 1 em (20 km) M	15(6	Anchored an barth N. Blaant Atoll. Sev-
Orcontiniinal' final Clearad	'an Locatton: Los Angriev Nov - By 77 November 1946		eral men were transferred to Fisse for September to Rwajalete Att]:
	and all the second and the	1636	Undermay to bert. N.
Tate Unit and		17:1	Proceeding to station #1 off Gaide: in

- 28 July |125 - Aschored in beach H. Aikini Avail. |812 - Underwey Los Swajalein Atoil
- 29 July Anchosed at Weapalein Acobe and did not return to Biking before seturning to the Whited States.

### USS GASEDHARF LAPH 851

Free Street 105 Bht Ink Atolik Arrival: Before DI May 1986 Ristok Atolik Separture. 24 August 1966 Crev Location for Shot ABIT: USS Brief (AFA 2021 Crew Location for Shot ABIT: USS Brief (AFA 2021 Shot BALT Location: 2.681 yaids (254 weilers) SSI Desentamination Location Sub yards (254 weilers) SSI Desentamination Location Sub Heatstaco Sube 21 July 1948 off The Youthern Cellifornia stats

Lask Unit and Function Gasconede, an attack Liansport, was a target vesset during ChOSSRONDS. Its tree was evacuated for each shot. <u>Gastrighter Served in Transportation Dt</u> vision 94 of TU J.2.6 Literchant Type Unit: <u>Gastrighter</u> <u>gade</u> was equipped with Gastget Counters and radio Litercettics for the Electronics Group.

Refore shot ARLE. G<u>anconade</u>'s cree was cransferred to <u>te</u>lest.

1 July 1619 Reparted to be Origer sever (Reference 6, 1 14-8)

2 July -

1100 Crew serviced to live about <u>Gesconde</u>.

Shot 24KKE (25 July, 0925)

Crew was evacuated to Beaug before the deronation

- 29 July 2039 ::<u>Detected</u>e han a 10 minute Loietanke. 2125 ::<u>Detected</u>e n:L1) ton tadinactive to board and temove the test animals (Xeference 6, p. L.38: Metermene 5, p. 1137-34).
- 30 July Dd10-1015 <u>LSS Propervon</u> (ACR-60 alongwide to wash Uown <u>Sacconde</u> (Reference 1, <u>proprior</u>). 1302 <u>Gasconde</u> (Still too radioarthe to bend. 1320 J405 USS Conserver (ARS 19) removed the ant wals and instruments from <u>Gasconade</u>.
- 2 Moguet Gesclovedé Uncrowyhly wabied down by USS Stour OUTF 451 (Reference 6, p. 1 /1).

A preinwinary inspection report on 7 August states that Ceptomade web severely demaged theterance 0: The main deck had a conding of 20 R/24 hours, and whore waves had accumulated in process readings averaged from 6 to 8 R/24 hours: the lowest readings were between 0.2 and 0 5 R/24 hours. The animal inspectment in Sick bay was 0.8 R/24 hours. Reference 8 also stated that the fahip appears not extensively dataged to permit perconnel to ite aboast over 31 reduced by were reduced to safe itematics. A 21 August decomposition report disclosed the maximum decomposition (growthe)

- Wet seempling and wathdown by Electrosed.
- Westaden of the upper decks with saltwater
- Amping contestnated water overboard.
- Topside pateriols jettisched.

Deck surveying and pain: removal was not attempted (Reference 2), Table 5.4 2000 the Average and mainrum Geoger readings from 7 to 27 August, which have been entracted from the 20 august Damage Report.

readings (8/24 hours)	

	Hay Town		hter age	
Date	Abs-P Decks	Erice Decks	Above Decks	đeln⊾ Oec≯s
T Aygysi	 •0	-: <u></u> - 70	—	
3 Augunt	40	20	-6	3
9 August	25	70	6 5	2.5
O Access	15	20	1	0 B
15 August	ė	10	1	6 2
16 August	é	é	0.b	61
11 August	•	6	1	6.2
24 September			រូ 4	
ourres Rel	,	2 and 1.		

 Negrest The crow crowsferced to <u>(RSE Sylvenia</u> (Ass 44).

27 Kagent 1996 1396 - Crev Vol

- jone jace Grew recorded to Bezar.
- 24 August 1.150 Geparted Staint to: wajalein to too by erx-192.
- 26 August Aribied Weajainin.
- 28 August
- 1390 Decountisationed.

Gas<u>conaus</u> was lowed to San Esthetisco for experimensation and severatory, is artificed these on 27 January 1947.

#### USS CANENA (APA-BA)

(rew Shid: 135 Bhain: Atoli Arrissai: May 1956 Bhaini Atoli Arrissai: May 1956 Crew Location for Shot ABLE USS Appling (APA-58) Erew Location for Shot ABLE USS Appling Shot ABHE Location (1.062 yirds (2.6 km) Sw Shot BAKER Location (1.062 yirds (2.6 km) S Decontamination Location: Jan Frunctiscu Scrapped on 2 November 1966

Task unit and lunction Septito, an attack Learsport, was a compet vessel during CROSSHORDS its new was evacuated for each shot. It served in Tredsportation Division 93 of

Shat ARE (1 July, D100)

### USS Geneva (APA-86)

THE / 6. Genergi centried Genge: coupless and radio. committees for the Electronics Group. SHOU WALL IN DATE: USCOM General a time bearded Appling before the detenation. Task unkt and Function 1 Daly 1952 (35 <u>Realegen</u> IAPA 54) temoved the seat animals from <u>General's conside</u>. 1510 Servers declared instally fails (set etonce ( pp H-12 and 3 ()) 7 July 115A the capitate and a radiological workfor reboarded. TRATA & and H Seturned to Cathera 100D The cadavate monitor declared Second free 1130 1.0019 of all radioscilusity. 3519 Ancholed in Seath 265 tweebar . 1 21 3519 1725 Sho: BARLA .25 July, DEDST 2.0019 .525 26 JCIV céan Bygan closing up ship. 5010 Evenuettic of Georgenia tree to Appling 7 9 July not pilete. ni ear 25 JUJY a hoty. 1210 1911 Geneva declared Celget sweet. Radiological clearance was given (Refer-ence 5, gp. & J) and D1.97, 2312 20.26 2019 78 JCIV 10:8-(0)0 test Animals serviced by Navy Medical Re-Reacth Unit on 055 Conteswor (NHS 199) 25 July 29 BC3y 1135 3516 the commuting officer and the unsight nonitor reboarded Geneval. 1350 Team & reheatded. 30 JULY 0535 (4)0 Tyun H rebont ded 3433 Geneval declared Selger Seever. 9621 1930 That C coarded. : 500 Seneral returned to purnar operations. < hample 1440 4 5 Avgust A total roomwas worklasted 9 NOQUES 5 August 12.27 0731 desitioned at alreads. 24 August 1567 Lefr BENthi Aroll. 1545 25 Noguet Assived as Reajstein Aroll. 1258 20 005-65 6915 11 October Departed for Pearl Maxbor. 1725 21 October Asiaved at Peacl Machon. 75 October Departed To: Sac Arandisco. including evaporators and engine rooms. and find only the stated significant condings which would be no begand under heighted at Sam Pearginge 4 SHOVERSDOX standard words randitions. Therefore, we recompend that the ship is red(o)outcally sale. Location of hazeeds, No. 5 conden-

### USS BECKEF CLYMER (APA-21)

Crew Skie. 200	
Bacters Aco's Acessa': 1 June 1986	
Shehey Alo'' Departura - 20 Pagust 1946	1.18

Shat Adid Hocalien - A21 mak (35 km) LHE Shah BAGER Locyfles - 518 mai (33 km) b Deconstantiation Location - San Diego Operations' 2 earance, dy 22 November 1966 Final Clearan en Dilebroary 1967 Attack Learnsport <u>Ciymor</u> was a support ship to Transportation Division 31 of WLL.3.1 (Transport thigh, its function was to hense ranget whap rivers during and after the tes descentions Shal MALE in COly, CSDD) Clymer toward creek, from ranget skips VSS Peorogivenka [48] [9] and USS Nevada (86-36). The cross returned to the phips on 2 and 3 daily. Underway the area Macton pushife the Anthored in borth 300, Bokini Asoki, Shilled as beach 200. Respectivents to Nevada to fatitish it. CONTRACT WED: NOVADA. Anchored in Secth 268 AND RAKER (25 July, 0835) Personne) from <u>Persoylvania</u> and <u>Neve</u>Ca were transferred to Cl<u>yb</u>er. substraining the acea desinent, outside the barbet, stearting each TG 1.3. Research and Albertatic Language. Anchored in beech 262, Mixint Atril Shidawd ca beach 13al A collophytical task was nonducted on  ${\rm Collophytical}$  . The test concluded that the evaporations were radiologically cofe for personel. Redsafe section of GTF 1 conforted a cadalogical inspection of Clymer and touch no reduction katacity. Redialogical posters repaired on board. Hadiological party left and rade the fol-(owing coordination . We have examined the possengers, personnel, and material.

> ser in engine room 0.12 P/24 hours lon surface) and 0.06 \$724 hours (at 1 foot

10.3 meter] distances.

Separted to: Penet Harboa.

332

### USS GITTAm (APA-57)

### USS Gypsy (ARSD-1)

USS GREETAM (APA-57)

Snew Steel 1911 States Ateal Arrayal, Before 30 June 7946 Crew Bolalsan for Shor AB(6) USS Bollingey (APA-235) Crew Bolalson For Shor BAREN - Yarlous (ask fortw units Shor BBil reasing, 47 years (43 meters) AMM Same 1 201, 1946, 816161 61011

Task onil and function. Gillian, an attack transport, was a rateer vessel ducing (ROSSROADS) it's care was evaluated todate shoe APLE and never returned. It actived in Transsocialized investigen 9% of TU 1.2 & (Merchant Type Unit:) Gilliam was equipped with Lidrophiress ender the control of the Effectionics Group.

Shot KSIT (\* Juha, 8900)

Glillyse a crow was evacuated to Botsineau before the dysensation (Gilligan sack as a result of the detonation) pluging ppy at loss were conducted later for examination of the stable

Shal 84856 (75 July, 0535)

Childen's new was dispersed to various units of the rask topic on Blikuly.

\$111355, JAMES # . See USS 19955 M. GRUPS 1465 931

#### 755 GUNSTOK MALL 1950 51

Erew Slue, 195 Bakton Alphi Arrawet - 3 May 1944 Bikhon Alphi Departuret - 25 Kuguat 1946 Shal Asik Localiur. 28 nm: (52 hm) 44 Shal SARFA (56alisa: 11 nm) (37 mm) 5 Deconclimination Los Angeles Operactional Electrarise. B January 1947 I snal Cheardoce 10 January 1947

Task Unit and Euscelon The dock landing solp Ginstop [41] served to to i 8.3 (Cispation lost and Boot Heavil, its interiors was to provide small bests for the boat poor mail service interaces; lonight, and packages setwice.

CANL ARLE II July, 09201

30 June	
F014	Underway for area outside of the legoon.
	stearing with of TC 3.6.
1 July	-
1916	Anomaled in Ewoth 94. Hierari Anoli
2 July	
1050	Leit fei maajahein koolbi
γ <sup>2</sup> μι ή 3360	
0945	Arrived at Kwajalein Acoll.
1 702	Separted for Bikini Atoki
¢ Ju?γ	
6919	Accreted at itself! Acolf to beeth 94.
Shal Bakiv i	25 July, 18351
26 Jusy	
1697	- Suderway to join 20 1.8 for aims outside

Underway to join 20 i.8 for aims outside of the Dapper.

25 July	
9945	Left the fotestion on route to Mongelap
	Mco!).
1642	licia yeingeog is formana
10 July	
0850	Lett for Bikthi Atoli.
1220	Arrived at Sikin) Areil and anchored Sa benth 94.
19 August	
1635	Ledi tai Kwajaleti Atobi.
20 August	
1038	λιτived ≪wajažejn krojš.
10/8	Didetway for Bikson Modil.
24 August	
0906	All trees of Biking Atols.
25 August	
16.JA	Departed for two jale in Arall.
26 August	
: 205	Archared at Shalu(eln Acol).
2 September	Departed for Pear' Harbor.
8 Soptember	Archved at Pearl Harbor.

#### USS STUST (MESU 1)

Crew Start 17 Biblinh Afoll Arrissi - 10 Joly 1946 Biblinh Aloil Departure: - 5 September 7968 Shot 4916 Childford ( 6h Londo from Pearl Marbor to Recjairin Atoli Stor BAKER Location. 17 mml (27 km) SF Securitization totallos: Fearl darbor/lot Angelet Operational (learance: 9 January 194) Filma (tratance: 19 January 194)

Task USI1 and Function Sypsy, a salwage lifting ship, served in TU L 2.4 (Salwage Unity) its functions to lumbed towing, underwates work using diverse and saiwaging darand target vessels

Shot #516 [1 July, 2960]

10 Joly 0915 1442 1527-1636 1735	Koored in berra (4), Bikial Acali. Underway to (33 LOT 60). Reored Alangside LST-86) ou discharge wit). Archosed in beach v9.
A July	
	Anchreed in beach 341.
1725	Anchosed in secth 19.
12 10 y	
12:0	Anchosed off Energistand.
1230	conded ancional and chain,
LI July	
1512	Let yo post ancho: alter shiftong an chorage olf know island to salvaye lost anchor
1070	Complexed sadvaging real anthons and shappy.
j695	Shifted berghu.
1.705	Anonosed off Frey Syland.

## USS Gypsy (ARSD-1)

. • July		Shas BARKA	.25 July, 0835)
1010-1125	Recovered thit of any boot		-
h ( D*)	Underway to USB Palton (MS (1))	25 July	
5220	Anchored off Fulton	1710	Anchored Lff Energy Include near bench
1045	Completed transferring acchoss to Pulton		Singer .
1020	Rectared to besth 29		•
		28 23 Cuty	Arthured as before.
is dely	After they you accoust from 1505 Heatids		
	OXPA 451, suchared to unspecified another	28 3919	
	434.	.050	Orderway to the stoletty of Centura.
	<b>.</b>	1243	Arrived in vicinity of Desiuda, standing
LT Duty			
9177-3810			by to asplat USS operal (ASM B) if re-
1000 - AC. 2	Alongside Cop Palette (AMA 99) to dispose		Q51740
	of anchos chains	11.95	Underway to Poleyra.
0459 (0055	Alonguide USG Original CARA 101: Colorans	:229	Standing to ut: <u>Ex.eve</u> s.
	Les anchers and chains.	, 7, 20,	Anchored in best sugar
1197 (42D	Alongatide (199 <u>6 Fragmen</u> (10-191) to take so	.0.0	intoriway to discharge two anthers for
	Frue I		mooting Dentade.
:500	Anchored in berth 69.	1655	Eperations completed, returning to as -
			0701804
.6 July		1678	Ancho:ed in unspectfied anchorage.
0925 1022	Alongstide Dig: Salaryse (JUSS(T) 0) to (cert		
	Cynamice.	29 Jety	
. 25 J	Accounted off depter following and commented	229	methoday and multiple and second second so
		/41	Endership: provineding to target ofen to
	-diving operations,		received submations anabots.
		1400	Commented recovering anchers.
15 2019		1503	labyer exacting of motive visits 0.25 k/24
0,200	Olelog party sets with its continue diving		Гамары.
	speciel loos-	1626	Recovering anther in visionity of intebebi
			Laiend.
23 201y		1555	Discharged socies to ree of concluding
0462	Жонанф (н ү?]Ч САЮдден С¦унниг (АРА 271.		75 Land
102)	Underway from Clymer.	-953	Anchor deposited underway to recover
1104	Monted politicide to they to the destrict (68		Second and both
	Aporton (25-308).	1800	Anchored in unspecified area
1912	Goderway from Apogen.		
1232	Anchored in perth 240.	20 July	
	AND PROVED IN DELEY PARTY	10 1017	1 Administra
			inderway.
21 3619		0765	taying to off this Rectaine: OARS 47:.
0632	Novred a onystan Asa <u>ao</u> n	1.149	anderway for target subwarshe stat gear
1920	Anderway from Apogon.		raven 455 1901.
0640 2020	Alençulde Clymer.	2824	Nocied to Searaver.
2037 3502	klongulde Apogon.	2840	Underway from Searoven. Gelger meret
1350	Revisional to heath 220.		teaking above toletance.
10:0 1748	Record alongside Cigger.	0910	Compensed washing submaning
3885-2921	Meened to target submarine us9 bentuda	1155	Secured from washing Secretary, laying to.
	(55-31)), disconiging 4+390(5	1512	Profeeding in analgoed notherage
:963	Ancho:ed off Seath 316.	1600	Anchored in tea of Engla (sland)
22 July		3: July	Semained anobored.
0556	Godetmay for Alongstide Denicida to com		
	plete tanging weights	ANALIST	
06-00		bite	I bed a superior
0000	Moored to De <u>nuod</u> a, proceeding to <u>Civ</u> mor		Underway.
	to creative weights for sarger subvertice	6640	housed to Scatavez, compared recovering
A	Ded jura 196 7031.	A	gn; (w) p.
9,556,120,5	Allongs Sdel Clymer	0 122	Orderway from eloxyside Geardnes with
3110-1045	Alonyatde Tu <u>na</u> , plated weights aboard		fice: anchor.
1411	Recooked in Decob 64.	. 626	Supervised anothers to see storage in lee
1910	Anchored 10 besita 29		of free fallends proceeding to bearingers
			to recover stern anthor.
23 July		::41	Hoored to Spar <u>ave</u> n.
1964	Atchored in Sarth (19	1540	Underway From allowighter Searawey, pro
			Servicing to an chotage.
24 July		.619	Jershored of fives is hand.
05)\$	Anchored near benth 7%.		
1265	Picked up monitor for ship duting test	2 MAGUST	
1242	BAKER.	2 544010	Shilled bershs off Energiations.
1 10-5	Coderway the operation area for test	1413	Aprilated better of bench 316.
1.4.1	скартина сиз срадазни, ника гра сала ВАУБИ.	1414	encer of the company of the formula and the
	Det La -	J. Jacques I	
		2 burgers.	

1055 Controlly for salvaging anchors.

### U<u>SS Gypsy</u> (ARSD-7) 3 August

1355 Anchored to area of final sweeping for anchors. 1445 inderway to area of Benrude to Anchor and serve. 1455 Anchor ed 2320 Recovered two enchors and chains Underway, proceeding to low of tenchebi Island to discharge anchor and chain. 2124 Laying to off north side of Involution and charm-2225 4 hugues 0025 Completed discharging anches and chain 0114 Anchored south of numbered leveling, near berth 376 5 August 0855 Underway to Palpyca. 1005 Anchored all Enen Island, roemenced cecoverang submarine and hors . 16.20 Mobled to spring body astern of anthors: 490. 1630 Salvaged anchors. 1630 Understay for set storage off (oncheb) Istand to dispose of anchors. 1645 Anchored off Lonchets Island. 6 August 08:00-2007 Conducted diving operations in connection with balloosed acchora. 5325-1435 Coolucted diving operations in connection with ballooned anchors. 1600 Undersway to Jesonebi Island to dispose at negative 1840 Apphored 7 August . Underway to cerrieve anchors. 09001 0910 in vicinity of lowneb: talend to retrieve archors. 1054 Underway to territory cally. 1105 Cable retrieved. 1120 Underway. Jaying to off <u>Coursi</u>. 1126 landerway to appropriate. Anchored in assigned berth. 1055 8 0.00051 0732 Underway to salwage whre although from teal <u>raven</u> Moored to Segraven, recovering wike 0805 slines. 1122 Started to clear side of Segrayon, anchor touled with Searaven ancroil chains, Cleased fouled archor chain: laying to 1405 whole awateing orders [comitty [.2.1. 6609 bideway, proceeding to anthorage. Anchored in assigned betth. 1635 O ACQUSE :415 Rooted to spring Duby in berth 54-A. 2745 Undersway to recover partially something with 2316 Competend secondry operations of LAP tirst Line to bear 10 huguse Č335 Cosplexed salveging LCM, proceeding to vicinity of Relation. Recharged mean Rylette, 0455 ¢ 155 Released LCM. 1125 stopsed on spring bury in positing at 12 Jugest íon Underway to Desjudy and thing in discharge

anchor and chose.

### USS Gypsy (ARSD-1)

1:08	moured to pentuda.
1150	Underway, promoting to available twith
	unaple to discharge anchor and chain.
6.240	Moored to spring outy be a
	scored to shring pool at it.
3 August	
ODAHG	Unide Swahr .
1005	Repred to target subwarding UJS State (55
	K31.
1937	inderway after stansfarting anchor and
	chain to Skyle: proceeding to assigned
	perch.
1354	Moored to besth 54-N
1248	Undermany.
1557	Monted to target vesse) (CT 834.
1430	LCT in tow, heaving in LCT's anchoz
1712	Anchor of 137-894 away and underway to
	brith Lis to anchor LCT.
2045	Archosed LCT mosth of tatget ship USS
1041	133-131 and beint 163.
2347	Anothing in the the Second Second
	have a free state of the second
K-18 Jacour	Moored as before.
19 August	
6759	Orderway to deliver chain to Pollon Los
	Servuda .
0815	Anothing of Pulton and transferred
	chain.
6930	Completed discharging chain and anchor.
0948	Designary to well storage off this bebb
	Island to recover this vessel's starbourd
	anchos and one shot of chain.
L) 15	Recoursed anchos and chain; proceeding
	to enchosene
1275	Hoored to berth 54-K.
20 Negast	Hoored as before
2 Auguria	
673C	Druđeć stay .
0757	Moored alongside target ship USS New York
	(HSH-34).
1600	Underway from alongsthe <u>New York</u> , pro-
	ceeding to betth 54 A.
1632	Accred to bench St-A.
-	
2 August	
6900	Discharged winch to LCM
1350	underway to plot up are bot and chain of
	(arget ship Ug5 (atgen (APA (71)
LGNU	Anonared of I Catron.
1545	Started neaving in Catronia anchor.
1945	sinderway, shifting besits clear of Ce-
	\$;no.
2015	Anchored cleas of Catron, 500 yards (457
	praess; south of beach 276.
August	
0650	Underway, proceeding to target ship USS Rutte (Rea 58) to take workor and chair
	on there is a contact accession and control of the second se
0425	an operation. Anchoored off bow of <u>Builte</u> .
1505	Commenced taking in Suite's anchor.
1957	
1620	Underway for assigned archotage. Anchored in berch 34-A.
1570	warenerge for owned being
4 August	
6941-1230	Fueied Syst Grocer.
	Referred water tion Brotee.
1410	Doktermay, proceeding to beach of USS LST
	158.
	.1.

SSID Underway from victority of SAT 168, procreating to beight 54-A.

## <u>USS Gypsy</u> (ARSD-)) 74 August

1555	Rechoiled in Soria 54 A.	l Cargot emagene 0255	Understay to may beinget western Lot \$175
25 Milgase C704	Underway to transfer chains and anchors.	DAID	from beach. Contheped operations we ret 11%.
0245 1040	Transformed anche: that a 1958 Shaka- Taasformed anche: that a 1958 Shaka-		Concrete operations of the context
		2 September	
:040	Endermony is unitially of Milling (Flored nearly in sake proparation on clear beach	1052	Dischalpund operations on ECT 2105 and underway.
	el ciarr.	1905	Nooted three to \$50 midgeon task , to
1957 1402	UhGearay (soa saynage operallofn Moored to bearn ti salvage tasger vesse)		<ul> <li>assimt is saivage of target subwarine USS Skipterk (SS-184). Moreed over Skiptack.</li> </ul>
	107-1237.	1.0.000.000.000	
		1 September	
it August		98 <del>0</del> 9	Heating ship to gasilize to aske life.
2415	Reveible to start operations for cowing	1022	Moored ship over how of submarise
	CUTS, LOTEL, and CLIVEN of L beach.	1155	Submarine such a set, and shown.
3215	Fighted will brids obtain of teach.	1346	Propeeding is accordingly off Rikini in
0955	Underway.		and.
0424		1932	Anchored off hauge: Island
0474	Anchored on vocinity of basics at Rikang - Interati	17.82	VILLEGLAC GET BUILTON TRUBBLE
1505	Underway, scarcing operations of clearing	4 September	
	Bight island beach of UCTs and other	07):	Orderway to salvage target vessel off
	(faf)		2211.
1535	NONTRY : CHEMICAL ApprintTotal de l'asget	0045	Mon(mà tự ,CT.
	wesse ichteig.	2063	<ul> <li>On secercling orders to concell operations.</li> </ul>
			on LCT, heaved accurd anchors,
27 Jugosi		Ja24	Underway to recover buoyed anchors used
0210	Commenced crying to have it? 414 free of		previously for salwage work.
		10.75	
	cearb at hayn tade.	1075	Anthers recovered, proceeding to vicinity
06:0	Ofsecolinged use of engineer weiting for		of Widgeon
	hậgh rade.	(12)	Anchored of hew of tridgess.
9191	Combensed Bácking Doth engines in opéra	14.3	Jrde; Way to seek up dischard anchar of
	Lions to live LCT 414 from hearth.		Stipjerk.
15(1		1430	
	CCT-414 Free Free Deach.		Levens to old Mid Hear.
:005	Maving turned LCT-414 over to demolition	2150	Rechoeed in vicinity of Skipjack
	team of Palmyra, comprised memory-critics		
	to return to beach Arga to belying synker.	<ol> <li>Verific transfer (</li> </ol>	
	.CN.	1102	. Ordeneway to silve up the with the S <u>ei</u> ph
: 144	Flusted UCM clear of beach.		160%.
1822	Anthored off Bikno: Inland.	1107	Anthored off bow of submatine.
1927	Anticiwa ofe elena, iniare,		
		L475	Tool row wire off Skip <u>it</u> re.
20 August		1946	(reparted the Namialein Control Skipjack.
0.145	Onderway to teartake mouthing another.		
1214	Secondered mourble ancher, contrating man	"September	
	neuvering and approaching surven saturat	0849	Accheced to berto D. Reajatein.
	Vessel L: - 1187.		
1;35	Housed off bisking island in windhip of	d Geptersen:	Cast one Skiplack on kingeon, proceeded
11.74		0.0010.0000.000	
	UCT-1.87. making recessary preparations		tu ancherage.
	ra llost can ti97.		
: 540	Pulled 137 1967 off teach and yeak it is	9 September	Toward 11 990 toom began at Kentalatas
	70 feet (24 meteon) of water.		cast wessel off to \$56 ChoMamor (ATE-
1645	Underway far Siking teach to solvage		1001.
	ICR-4 and ICR 6.		
1.246	Roored off Pikint Grach, preparing (c	10.16	k-+-
1755	· · ·	to 10 Deleter	
	satvege cOis.		En toute from Real-sub-th Place Hatburg
1805	Polled Low 5 off beach.		
1810	Ottomrway to ancherange,		
1850	Anchored of Social Arols.	<ol><li>Servember</li></ol>	Assived at Pearl Masbor.
00 August			
1203	Operations continued with target wessel		JSS HAREM INH 121
111.3			STRUCTURE LEVEL
	124-612		
<b>; 4</b> 00	Wire and alshow rup out and secured to	- Crea State - A	416
	LCT-B(J.		4 Ival: 12 June 1945
2457	Heaved not B12 from beach.	E14111 44611	beparture 25 Kugust J46
1500	Commenced texting shap a trivialings, port	Stor AB. L. A.	20154. 21 5 MBS (40 AMI FM)
	anthat fouled.	Sho! Pacia 4	orethen. 11.5 em (21 km) b
1,200			Nor itestice i is Angeles
1.401	Towed 107-812 to deep water. DJT-812		
_	e e e e e e e e e e e e e e e e e e e	operational (	Clearance (A Rebruary 1947
1165	Anchosed of [ 2)sing Island Wearh.		
1800	Racied LCN 5 Stor, Search.	i tasa untu ata	
1964	Proceeding to averturinger of Pikishi	Tre bos	pates shap Haven Aeswed in TV 1.1.2 (in .
	island		Lation). (is (excline was oversering the
	hachared off Biktol (sland.		logistics of the operation by protecting
1910	was symmetric activities (\$140KG)	Process 0.5	workerster to the observerate by Starsectual

personnel from rodygjogisel Nézénde and Collecting samples of water, dood closhing, drugs, and gen etal shotekeepsng Lines that were reserve Redsate Section was headquarterize aboatd the ship. [nucling the period that Haven was chapted in (Wesselly) club(1965, in version the pull suggest Afe-1]2.]

Shel Apik (4 Buly, DACO)

K June 1552	Let: the lagues for when Gradum
L July ED04	And≥oced in berth 138A. Bixini Atols.
e Caly E123	Shifted to berth J4A.
S Caly HeCO	cillenal observers reported aboard.
Shal <u>A</u> RFM	(25 July, 6835)
24 Juby 1538	Underway for area System.
25 JULY 9835 8519	Coserved blast on area Chevepter. Anchored in berch loger. Hikini Acoid.
29 Jusy	

idea shafted to berth C

29 Juby

s035 Shifted to berth 34A.

2 Novest s650 Hoved to Secth 383.

- 05 August 6600 — Departed fo: Kwajaigin Atoli.
- 25 Royant AttShed at Kirajalein.
- 10 October Left Kesjaiein for Pearl Harbor.
- 15 October Accitved Weard Harbor.

#### USS HENRICO (APA-45)

Crew Sige, 424 Station Atoli Acchaet: Defens 2 June Ayab Bishon Atoli Departure - ME August 1946 Shat Agus scratter, - 20 mmt (24 km; 54 jarea Feseral) Shat Agus scratter, - 20 mmt (24 km; 54 jarea Feseral) Deconcember - 2 mmt (24 km; 54 Deconcember - 2 mmt (24 km; 194) Linet Clearance - 2 fortugary 1940

Lask Unit and Function <u>Hentibus</u>, an attack (recepted, served in Transport tasks Devicing 3) of 70 4.3.1 (Transport Unit), its functions were to become carget vessel cross during and alter the decometonic and to serve as a methem while the decometonic and to serve as

Shot ABLE (1 July, 0900);

### 30 June

14.18 Underway Son area Referry Stading Wills <u>(55)</u> <u>Applicut</u> (ARA-56) and USS <u>Appends</u> (ARA-251).

ניין 115-8-115 115-8	Approached the Ingoon entrance. Lowered Seven Kodtological patrol beats (LCPLs) and departed the Lagoon Anchured in besth 315. Bikind Aroll.
2 July Lave 1620	Stifted to beath 200 ofted diversianting sease free carges ships USS Platen (APA 60) and USS Carron (ApA-71) and embarging other Bladen Lears. Oisembasked boarding ruan personnel from target Colps <u>Flater</u> . <u>USS</u> <u>Seiph Takbor</u> (DD SMD). USS_ <u>Savson</u> (MPA-79). <u>Call</u> on, are USTS.
) 2014 US45	Lowered all radiological boats in the water.
Smot BACIN 12	25 Jely, 0835)
se joly I San	Brænnay for stea skitisk of the lagoon. Stearing with <u>App</u> ring and Arte <u>sts</u>
25 July July-Inic (542	Lourchood seven carbological parent boars (LCPLA) mean entrance of legona- Anchored in Dechi Sugar, Picini Atrib.
₽≥ ticky	shifted to petih 500 yarda (453 seleji). Weşt al Charlie.
29 July 0725 1350	Last etruite programmed from talkyet etry 1755 Brack <u>er</u> (APR-54) reported aboard Discubarked Texas A and B from <u>Bl</u> aden to nature to their ship.
10 July 0574 1815	Ansingted to meetile 242. Shifted meeting to a meetile 240 yeards (274 meters) west of 21.
3) Julγ 2513	Anchored in Decth 22.
? Ragast Leyy	Powed to berth 354
36 August	Departed for Pearl Harbur and San France r)sco.

#### USS HESPERIA (AKS-13)

Crew Sise: 199 Etkini Aloli Arrivak. Before i Jula 1946 Statut Atoli Departore: 23 August 1946 Shat ABIS decation: swajato'n Atoli Shat EAKER Location: 15 cm² 120 kml t Decostamination Socation: Pearl Harbor Operational Exertance. 75 December 1946 Final Chestonic & January 1947

Task Unkl and function Meggering was a general stocks taske ship that we used to 20 5 A.1 (Repair and Service Units) the Europian was to provide previsions to these suppart ships during the operation.

Shot ABLE (1 July, GODI)

30 Jane

1707 Annhoued in berth # 12, Meajalein.

## USS Hesperia (AKS-13)

## USS Hughes [DD-410]

i July 1915	Underway for Bikins.	CPOSSP0/	croyer Hughes was a targer vessel during OS. Its crow was evenued before ARLE and
2 July (277	Anchoted in beach 250 Disini.	047205 70 67 70 1	etuenet. Et berved (n Destroyer Olvision ) 270 (Destroyer Unit).
ying () Viel (	Anchored in DectD 145, 215(r1)	SMar A8,} yl : July	July, 0900) Come executed to Baylield.
<ul> <li>24 h, ty</li> </ul>	Pourthy supply losing operations.	. 4317	cree pressive to parteria.
SMEE BAKER 17	t uply, 0975,	9111 9111	Tean & sider Commanding offices setwarded to screep damage
24 Daly (500	Modernay fall stea Parkstil.	1400	Test 8 reboarded: commanding office: in spectral folds of 1 level decks and operand up secured compartments
25 Caty 0950	teft formation en quate to surgelap. Atoli	1415	Started emergency diesel getarata: for lighting and power, inspection disclosed extension superficant damage and damage
1623	Anchored in perch 15. Pangelay Atril		to bollet als rasings Camage reported to COTE 1.
29 Doly 1620	Underway from Pangelap to Otkin'	5 July 8340 1495	Tured by INS, Clange 1455 331 term by th
10 Saly 2857 1960	An.Perind to perit 145 - 304541. Anamound in perit 1314 - 804541		51 to 155 State (AD+14: in boats 9) for repair work on batter air casings.
31 July 7 Aug		6 JULY 10JU 1500	YTE (3) removed unstable semunision.
	Rowslew oper at Jens.	17 3619	
2 Muquat 1852	Anchored in Desch 369, Dikawi Avoli	09.00 :015	<ul> <li>Inderway from Ciple to evaluated metab.</li> <li>164.</li> <li>Anchored in tweeh idea, Staint</li> </ul>
5 August 1541-1811	DCT 11%; ecoded alongsode.	23 July 109	Team of the and the sugarization left
F Naquat 0726	Anchared in barth 1114, Bisini		for Boy/Seld
		24 J.: LY	The build and an interval and a second secon
8 Muguse 1247 1426	LLT (420 moored alongside starboard	07 <b>6</b> 5 ,020	Teap B of reboarding organization de parted for Regitald. Team N 2ett for Hayfleid.
14 A.g.st 11/0	Anchored by berch (52, Blach).	Shot BALFM ()	75 Jw(y, 05051
22 August 2000	Despected by 27M I Raduate ChSp Citating Board for racionarrayity. Clear of radio- activity except for evaporators.	28 Jaly	Noticed off Rieu lojand, soutceaseers part of Region, by USS Reclaimer (NRS 42) to provent possible stating because of demage Sustained during CARER
21 Jugast		L August	
ودر]	Underway (os Xwa)dicin.	1,00	All <u>they're</u> presente: transferred from Baysteld in USS Rockingtam (APA+229).
24 Aogus: (424	Anthored to berth K-9, Keatelein.	16 Magust 0545-1000	Demonstating officer and nine others in
AL Jugard	Orderway for What, Misbus		cearding party researced Hughrs for pro liminary Cocontratisation and Importion
(2 September:	Actived Pearl Hackor		work Boarding party departed for Rock ( <u>nchae</u> ).
	<u>155 HOGHES</u> (DJ-410)	12 Magust 5400	Ship purped day, retracted from beach by
	) Arrivsi: Betone 30 Jule 1945 Departure - 26 August 1946		nationing freq. (c) married to a try week of Phone Estand.
Crew Location Crew Location Shot MML! Loc Shot MASIR Lu Secontaring16	<pre>&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;</pre>	[7 K.agrist (0404 3110	Three was boardsog party diodid ship to assess in salvage operations. Boarding party felt ship coll referend to <u>marking</u> ham

E& Anopenit		24 August	
0816 1030	These officers and boarding party co- hoarded ship (or salvage and hospertion work, possible party departed.	L IOO	wit H <u>aghe</u> s personnal on <u>Rochinghar</u> under way for Kwajelein.
0,400	rout offlicers and boarding party ter-	28 Magane	
1430	bearded for Inspection Rest admined DearGed Shap for hospection of damage.	0200	Transferred milite coer of Rughes to te worded target ones USS Wiegers (ARA-87). Bu <del>ghes</del> decomplisationed
1615 1615	Peer admitted and party departed. Ship'n Guarding perty departed for P <u>r</u> yk Engnam.	lo teptester	Topside average C-3 8/24 nours (Wefe; ence 2).
15 Avenus: 0830 (215	Commanding officer and elevernomics with per with boarding party reboarded ship to continue damage proportions and accisi to assivage operations. Boarding party returned to Sockinghym.	1997, attiv1;	ionno to Payol Sound Novas Sulphate in Nov ny on di May, toi radiosogleat fanto R <u>OBERT K , ven USS 200661 k,</u> MUNI N <u>GER</u> M
15 August			
ýr)()	Bestuling party boarded ship for insper loarding party boarded ship for insper light and shipage operations.	Crew Sile: 1	<u>USS (MOEPEMOEMC</u> ) (CNC-72) 343
11)0	Boardang party bepakton shap for R <u>oc</u> ul <u>ng</u> - hog.	Entine Apoll	Arrival - Before 30 June 1946 Departure: 28 August 1946 n 457 Shot AB(f - USS A <u>gi</u> ma <u>i</u> l (#74 730)
17 August			n for Shal RAKEP: Rockwell
99.00	Capturing and electrophics officer with boarding party reboarded ship to con rigue damage inspections and salvage operations.	Shot ButtA Lo Decontaminati	anites = 650 pards (594 meterin) Smi ocathon: -1,470 γarSs (4,3 km) N ten recation: -San kran,tses ary 1551 off the socihern California coast -
3000	Boardboxy party bets ship and recurred to hockinging	fash your act	•
Tangwat (PT Of 90 Of 10	Companding officer and first (feutenan) relaxited ship with reboarding party for imspection and sajenge work Topside average 0.4 M/A inves (Reference T) Boarding party departed for Rockingham.	get form Gated († Divisija: End <u>e</u> psis	and during CHESBENTE: The order and even before both shots in served in Carrier a 31 of TU LV.2 Unincials Cherter Unit), dende carried ball constant grades when the e Group and test alcurate on its flight
X) A.qust 3800	Communiting office: executive affices, and containg party recourded spip for	5701 JUNE (1 10 JUNE	
1960	salvage work. Svip dorbed for inspection in AND-29 Encourse officer and party were taineved.	1017 13.5	Evaluated Group 11. 4 taxad of 8 officers and 10) enlisted monito Rockwall. Complement evaluation of Group 211. 6
1630	by flow likewisewant and party. Boundary party departed for Rockingham	1905 (402 8612	ulthears and 62 enlised men. Theymolican team aboard. Captain and his party of 3 officers and
И Харьзт			t2 entired men teft for Pockesti Ship
C\$00  110	Community offices and eithers rebugged Skip for inspection purgoust. Southing ream and executive offices department.		Cooperation, a performed and no performed attacks.
1308-1300	Sounding ream reboarded ship to set ba- teriol condition (enco: overging them departed for R <u>octingham</u> .	1 July 1402	A large five Max seperited account the approachable due to contaminated mater sourcearding whip dictories a 5, p. 5-115.
22 August 0840	Constanding office: and convers boarded	8700 8757	Fice excinquished. Mare lines and explosions reparted that
<b>69</b> 00	thip to assist in undertainty. Ship undeeland tool return to tow by (SS - Seakamaron (Annäße.	2 July	erenve S. p. Arkij
Eine	Maged in budy, bearing party departed for Rockingham	1001 1001	Trand by ATL-180 to western cations array. The Sites were valing-12000 (Relatence 6, pp. 1-25-A, and 1-34-A).
23 Jugest			- FL
ńчсо.	First Sincenany and beaching party co- project ship to take ebeard an unchos and 90 (athems: (162 betwee) of chains	4 Puly	By this date, initial boarding team had been aboard (date unknown) and declared (he ship ship the terboarding by Jeams A
1100	Boarding reas departed for Bockinghas.		and B.

## USS Independence (CVL-22) 4 July

## USS Independence (CVL-22)

:341			
	Captern and his party actuation the ship.	15 July	
1351	Team 4. constaring of 19 officers and 28	0790	Embasked Stom Rockwall and proceeded to
	entisted met, completed reboarding and		kr.cependence .
	communical impection of the ship with one	16.30	Evenuated personnel returned to Rook-all
	radiological monitos.		dor the sight.
(400   44D	team B rebearded ship and moved to		· · · · · · · · · · · · · · · · · · ·
	forward end of the Origon dack added the	th Judy	
	command of the engineering officer.	6910	Swivege hange may alongside with divers
1541	DARTY from USS Horleson (ADA-63) came	•••	to check scenes and bettom of ship from
1.41	abuard to photograph, inspect and pice		frame 139 aft.
	up arisals.	: (23	Completed evaluation of personnel ro
1630-(115	tratestatistip.	. 10 3	Romana Participation and personality for
10.001	Traces my surger		ha hadaa.
S Ducy		NT 10000	
3 301¥ 3845	dented a contractor contractor dut at 20	17 3α3γ 7755	North the day of small some should foll
9945	Capteln and party rebailed whip.	7:77	Perty his day a work name strend Inde
0400	Team & and selected members of Team is reboarded ship.	1011	pyr <u>dence</u> . In newly assigned servic, texad by USS
1630 4630		107	
1030 6670	Evaluated ship.	1956	Dejiver INRS-131
		14:45	Completion most for special lasts.
6 JJ;Y	•	1.4. 1	
0945	Captain and party rebeaterd ship.	10 July	•
<b>n9</b> ;0	Team & and selected members of Team B	2765	Commenced secesiving man from Pockney1.
	reposeded Ship	1314	Shap completely evacuated for William
0955-1055	Inspection party aboard.		retraise).
1540-2645	Freewared ship.		
		14 CO14	
t July		14:0	Certair men from Loe B and C divisions
0# 50	Capitals and party releasided independence.		reboarded independence.
	Team & and belevend members of Team is ond		
	the ship s company seboasted.	70 Buly	
1545 ,735	beauting ships there algorithms left	2755	Commerced reportating mon (rep. <u>Pupinal</u> ).
	aboard los anchos Match		
		21 JU2Y	
9 July		1751	Working garabes from <u>Independence</u> crew
3853	Capialo and party teboarded independence.		Abuard Rockwall began comany Abuard.
	General working party and designated	1600	Completed everyarion.
	ufficoux reboarded.		• • • • • • • • • • • • • • • • • • • •
3500-2725	Evocuated ship	23 July	
		: 755	Working pairies of independence reev
9 July			terland femt Rockes !!.
1032	Boosed to new beach.	\$605	Completed evacuation personnel on Rock-
1245	Phoesked to small powers store Racional's and	•••••	<b>44</b>
1550	proceeded to <u>independence</u> . Evenue ion of ship nomblesed encod for	Shal NAKRA 1	25 JUNE 0815 :
1540	Eventiation of ship completed errept for	Shel MAKIA ()	25 July, QB34;
1550			25 (i.ty. QR)4;
	Eventiation of ship completed errept for	24 JC19	-
it July	Everyation of ship completed erropt for engineering and signal worch.	24 J⊡1¥ 2005	Captain and party boarded ship
	Even;etten of ship completed erropt for engineering and signal worth. Endworked in small boats from <u>Kurkwaji</u> and	24 JU:V 2805 1145	Captain and party boarded ship Categories evenuesing personnol from Ship-
lt July \$750	Eventiation of ship completed entrop: for engineering and signal worth. Entropies in shall beats from <u>Rinkwail</u> and proceeded to independence.	24 J⊡1¥ 2005	Captain and party boarded ship Categories evaluating personnol from ship Captain and persy Left the only. Wide
it July	Even;etten of ship completed erropt for engineering and signal worth. Endworked in small boats from <u>Kurkwaji</u> and	24 JU:V 2805 1145	Capinin and party boarded ntip Commenced evaluating personnol from Ship, Capair, and persy left, the pair. Odp completely evaluated to Rockeyil, engine
11 July 1750 1674	Eventiation of ship completed entrop: for engineering and signal worth. Entropies in shall beats from <u>Rinkwail</u> and proceeded to independence.	24 JU:V 2805 1145	Captain and percy boarded ntip Categoric evaluating personnel from Ship. Captain and percy Left the only. Odp Longitudely evaluated to Rockmeyll, engineering plant completely secured, sit
11 July 2750 1624 11 July	Everyation of ship completed errop: for engineering and signal worch. Envaried in small boats from <u>Kurkwail</u> and proceeded to independence. Completed everyating ship.	24 JU:V 2805 1145	Captain and party boarded ntip Commerced evaluating personnel from Ship. Captain and perty Left the only. Chip completely evaluated to Rockeyll, engineering plant completely security all cross-connecting lines secured, and in
10 July 1750 1674 11 July 0600	Everyation of ship completed errop: for engineering and signal worch. Envarked in small boats from <u>Kurkwail</u> and proceeded to independence. Vempleted everyating whip. Completed everyating whip	24 JU:V 2805 1145	Captain and party boarded ship Commenced evaluating personnel from Ship Completely evaluating to Rockeyll, Engl rempletely evaluated to Rockeyll, Engl meeting plant completely swouted, all cross-connecting lines secured, and in conflicte of maximum sater*tight integrity
11 July 2750 1624 11 July	Even;etten of ship completed errept for engineeting and signal worth. Enverted in stall boats from <u>Renkwaji</u> and proceeded to independence. Vempleted evenuating ship. Completed evenuating ship.	24 JU:V 2805 1145	Captain and party boarded ntip Commerced evaluating personnel from Ship. Captain and perty Left the only. Chip completely evaluated to Rockeyll, engineering plant completely security all cross-connecting lines secured, and in
10 July 1750 1674 11 July 0600	Everyation of ship completed errop: for engineering and signal worth. Enhanced in small boats from <u>Rinkwail</u> and proceeded to independence. Completed everyating ship. Completed everyating ship from <u>Rinkwail</u> Completed everyation of ship: one offices and eight enlisted men left aboard as	24 JU:Y DROE 0145 0316	Captain and party boarded ship Commenced evaluating personnel from Ship Completely evaluating to Rockeyll, Engl rempletely evaluated to Rockeyll, Engl meeting plant completely swouted, all cross-connecting lines secured, and in conflicte of maximum sater*tight integrity
10 July 1750 1674 11 July 0600	Even;etten of ship completed errept for engineeting and signal worth. Enverted in stall boats from <u>Renkwaji</u> and proceeded to independence. Vempleted evenuating ship. Completed evenuating ship.	24 JU:Y 2800 3145 3316 2316	Captain and party bounded ntip Catherpord evaluating personnol from Ship Catherpord evaluating personnol from Ship Capturely evaluated to Rockeyll, engl- neering plane completely secured, ell cross-connecting lines secured, and in condition of maximum water*tight integrity for shot DAMES
10 July 7750 1624 11 July 0800 1535	Everyation of ship completed errop: for engineering and signal worth. Enhanced in small boats from <u>Rinkwail</u> and proceeded to independence. Completed everyating ship. Completed everyating ship from <u>Rinkwail</u> Completed everyation of ship: one offices and eight enlisted men left aboard as	24 JU:Y DROE 0145 0316	Captain and party bounded ntip Catagona and party bounded ntip Catagona and party tell the only. Chip completely executed to Rockeyll, engi- meeting plant completely secured, all cross-connecting lines secured, and the condition of maximum sater*tight integrity for shot DAMER Portside wary codenative (Reference 6,
11 July 7750 1674 11 July 0800 1535	Exampleton of ship completed except for engineering and signal worch. Endesked in small boats from <u>Rinkwail</u> and proceeded to independence. Completed examiniting whip. Completed examiniting whip. Completed examiniting whip: Completed examinities on the firm <u>Rinkwail</u> Completed examinities on the firm <u>Rinkwail</u> completed examinities on the firm additional and engine examinities and left aboard as wards transfers.	24 JU:Y 2800 3145 3316 2316	Captain and party bounded ntip Catherpord evaluating personnol from Ship Catherpord evaluating personnol from Ship Capturely evaluated to Rockeyll, engl- neering plane completely secured, ell cross-connecting lines secured, and in condition of maximum water*tight integrity for shot DAMES
11 July 1750 1674 11 July 0600 1535	Exemplation of ship completed emept for engineering and signal worch. Envarked in small boats from <u>Rentwall</u> and proceeded to independence. Vempleted evenuation whip. Completed evenuation whip. Completed evenuation of ship: one officer and eight emilianed man left aboard as ward: transfers.	24 Ju:14 2800 3195 3316 3316 3316 3316	Captain and party bounded ntip Catagona and party bounded ntip Catagona and party tell the pairs (Rdp capturely exacuted to Rockey), engi- meeting plant completely secured, edi- cross-connecting lines secured, and the condition of maximum sater*(ght integrity for shot DAMEX Portable wary codenative (Reference 6,
11 July 7750 1674 11 July 0800 1535	Exampleton of ship completed error: for engineering and signal worth. Enderked in small boats from <u>Rinkwail</u> and proceeded to independence. Completed evaluating ship. Completed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineed evaluation of ship except 27	24 JU:Y 2800 3145 3316 2316	Captain and party bounded ntip Catagona and party bounded ntip Catagona and party tell the pairs (Rdp capturely exacuted to Rockey), engi- meeting plant completely secured, edi- cross-connecting lines secured, and the condition of maximum sater*(ght integrity for shot DAMEX Portable wary codenative (Reference 6,
11 July 1750 1674 11 July 0600 1535	Exemplation of ship completed emept for engineering and signal worch. Envarked in small boats from <u>Rentwall</u> and proceeded to independence. Vempleted evenuation whip. Completed evenuation whip. Completed evenuation of ship: one officer and eight emilianed man left aboard as ward: transfers.	24 JU:9 2800 3145 3316 3316 27 Ju3y 1654 1 Angust	Captain and party bounded ntip Commenced evaluating persistent from Ship. Captain and perty Left the only. Objecting completely evaluated to Rockeyll, engine meeting plant completely secured, all crows-connecting lines secured, and in condition of maximum water*tight integrity for shot LEAVER Portoide very codimentive (Reference 6, p. 1-24-36.
11 July 1750 1674 11 July 0600 1535	Exampleton of ship completed error: for engineering and signal worth. Enderked in small boats from <u>Rinkwail</u> and proceeded to independence. Completed evaluating ship. Completed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineed evaluation of ship except 27	24 Ju:14 2800 3195 3316 3316 3316 3316	Captain and party bounded ntip Commenced evaluating persistent from Ship. Captain and perty Left the only. Objecting completely evaluated to Rockeyll, engine meeting plant completely secured, all crows-connecting lines secured, and in condition of maximum water*tight integrity for shot LEAVER Portoide very codimentive (Reference 6, p. 1-24-36.
11 July 1750 1674 11 July 0600 1535	Execution of the completed error: for engineering and signal worth. Enhanced in small boats from <u>Rinkwail</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineers. Howedod Independence. Completed evaluation of ship except 27 selected ten of B division and siles	24 July 2800 3145 3316 27 July 1454 1 Amplet 12 August	Captain and party boarded ship Catherood evaluating personnol from Ship Catherood evaluating personnol from Ship Captain and perty left the pair. Chip completely evaluated to Rockeyl, end neering plane completely secured, and in cross-connecting lines secured, and in condition of maximum sater*tight integrity for shot Javez Portoide wary codimentive (Reference &, p. 1-24-36. Loop out retranded due to radioactivity.
11 July 2750 1624 11 July 0600 1535 12 July 9900 (4:5	Execution of the completed error: for engineering and signal worth. Enhanced in small boats from <u>Rinkwail</u> and proceeded to independence. Completed evaluating whip. Completed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineers. Howedod Independence. Completed evaluation of ship except 27 selected ten of B division and siles	24 July 2800 3165 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Catherood evaluating personnol from Ship Catherood evaluating personnol from Ship Captain and perty left the pair. Chip completely evaluated to Rockeyl, end neering plane completely secured, and in cross-connecting lines secured, and in condition of maximum sater*tight integrity for shot Javez Portoide wary codimentive (Reference &, p. 1-24-36. Loop out retranded due to radioactivity.
11 July 7750 1674 11 July 0800 1535 12 July 9900 16:5	Execution of the completed error: for engineering and signal worth. Enhanced in small boats from <u>Rinkwail</u> and proceeded to independence. Completed evaluating whip. Completed evaluation of ship: one offices and engineed evaluation of ship: one offices and engineers. Howedod Independence. Completed evaluation of ship except 27 selected ten of B division and siles	24 July 2800 3145 3316 27 July 1454 1 Amplet 12 August	Captain and party boarded ship Catherood evaluating personnol from Ship Catherood evaluating personnol from Ship Captain and perty left the pair. Chip completely evaluated to Rockeyl, end neering plane completely secured, and in cross-connecting lines secured, and in condition of maximum sater*tight integrity for shot Javez Portoide wary codimentive (Reference &, p. 1-24-36. Loop out retranded due to radioactivity.
11 July 2750 1624 11 July 0600 1535 12 July 9900 (4:5	Exampleton of ship completed errept for engineeting and signal worth. Enhanced to independence. Unapleted evaluation of the <u>Biskwall</u> and proceeded to independence. Unapleted evaluation of ship: one difference and eight enlished man left aboard as wards transfers. Howeded Independence. Completed evaluation of ship except 27 selected ten of B division and sites asteriet divisions.	24 July 2800 3165 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the paip. Chip completely executed to Rockeyl, end- neering plane completely secured, and in cross-connecting lines secured, and in condition of maximum sater*tight integrity for shot lawer Deptote wary codimentive (Reference &, p. 1-24-36). Creationsferred to p55 Alas (22 B). Regoir explored to p55 Alas (22 B).
11 July 1750 1624 11 July 0800 13 July 0900 14:5 13 July 0790	Exampleton of the completed encept for engineering and signal worth. Enterted in small boats from <u>Renkwall</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one offices and engine evaluation of ship: one offices and engine evaluation of ship except 27 selected evaluation of ship except 27 selected evaluations. Completed evaluations. Completed evaluations.	24 July 2800 3165 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the phip. Output output-cip executed to Rockeyll, engi- meeting plant completely secured, all cross-connecting lines secured, and the condition of maximum eater*tight integrity for shot Haves Doptoide wary codimentive (Reference A, p. 1-04-00). Creating out retranded due to radioactivity. Creating and retranded due to radioactivity. Creating exclusion of p55 <u>Alas</u> (RE b).
11 July 1750 1624 11 July 0800 13 July 0900 14:5 13 July 0790	Execution of the completed encept for engineering and signal worth. Enverted in small boats from <u>Rinkweil</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one officer and engineering whip: one officer and engineering. Completed evaluation of ship except 27 selected termination .	24 July 2800 3165 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the pair. Odp completely executed to Rockeyl, end considered plant completely secured, and in cross-connecting lines secured, and in condition of maximum sater*tight integrity for shot lawer Deptote wary codimentive (Reference 6, p. 1-04-06). Complete retranded due to radioactivity. Cree transferred to p55 Alas (AR B). Regoife explicitly of S5 Alas (AR B).
11 July 1750 1674 11 July 0600 1555 12 July 0500 14 July 0790 1590	Exampleton of the completed encept for engineering and signal worth. Enterted in small boats from <u>Renkwall</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one offices and engine evaluation of ship: one offices and engine evaluation of ship except 27 selected evaluation of ship except 27 selected evaluations. Completed evaluations. Completed evaluations.	24 July 2800 3165 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the pair. Chip completely executed to Rockeyl, engi- meeting plane completely secured, and in consistential integration and in condition of matters water tight integrity for shot BANEX Deposite wary codimentive (Reference 6, 0, 1-04-00). Complete retranded due to radioactivity. Cree transferred to JSS <u>Alas</u> (RR 6). Redpose explorers and 30-man boarding party opened (Independency, Independency)
11 July 1750 1674 11 July 0600 1555 12 July 0500 14 July 0790 1590	Exampleton of the completed encept for engineering and signal worth. Enterted in small boats from <u>Renkwall</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one offices and engine evaluation of ship: one offices and engine evaluation of ship except 27 selected evaluation of ship except 27 selected evaluations. Completed evaluations. Completed evaluations.	24 July 2800 3165 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party bounded nilp Categoric evaluating personnol from Ship. Captain and party left the polp. Chip completely evaluated to Rockeyll, engi- meeting plant completely secured, all cross-connecting lines secured, and in condition of maximum exter* cpli integrity for shot DAMEX Doptothe wary codinartive (Reference 6, p. 1-04-00). Cree transferred to p55 <u>Alas</u> (DR 6). Register explosive and 30-man bounding party opened (independency, interting for explosive and coal games and lark of oxygen and muniforing caligactivity.
11 July 7750 1624 11 July 0600 13 July 0900 14:5 13 July 0790 1610	Exampleton of the completed encept for engineering and signal worth. Enterted in small boats from <u>Renkwall</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one offices and engine evaluation of ship: one offices and engine evaluation of ship except 27 selected evaluation of ship except 27 selected evaluations. Completed evaluations. Completed evaluations.	24 July 2800 3145 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the pair. Oddp completely executed to Rockeyll, engi- meeting plane completely secured, and in cross-connecting lines secured, and in condition of maximum sater*tight integrity for shot HAVEX Deptote wary codimentive (Heference &, p. 1-24-36). Cree transferred to JSS Alas (AR B). Regate explored on JSS Alas (AR B). Regate explored and 30-man boarding party opened (independency, interflim- for explosive and topic games and lark of explosive and topic games and lark
11 July 1750 1624 11 July 0800 1535 12 July 0900 14 July 14 July	Exampleton of the completed encept for engineering and signal worth. Environment of the source of the proceeded to independence. Nompleted evaluation of the <u>Bix kyall</u> Completed evaluation of ship: one difference and eight enlisted the left about as words there an issue of the coord as wards there an issue of the source of the and eight enlisted the left about as wards there of B division and the selected divisions. Completed evaluation of the same of the selected the of B division and the selected divisions. Commences evaluation of the following the sources evaluation of the source of wall. Commences evaluation of the source of the sources	24 July 2800 3145 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the phip. (Adp completely executed to Rockey), end remains of party left the phip. (Adp completely executed to Rockey), end cross-connecting lines secured, and the condition of maximum sater*(ght integrity for shot RANEX Deptoide wary codimentive (Reference &, p. 1-24-8). Crew transferred to p55 <u>Alas</u> (RE b). Redpoir moplicate and 30-man boarding party opened (independency, integrity) for explosive and table and redpoir for explosive and table and redpoir of explosive and table and redpoir of explosive and table and redpoir of explosive and total games and lark of explosive and total games and lark
11 July 1750 1624 11 July 0800 1535 12 July 0900 14 July 14 July	Exampleton of the completed encept for engineering and signal worth. Enhanced in small boats from <u>Rinkweil</u> and proceeded to independence. Completed evaluating whip: Completed evaluation of ship: one officer and engine evaluation of ship: one officer and engineering. Completed evaluation of ship except 27 selected ten of B division and thes astacted divisions. Completed evaluation of ship except 27 selected ten of B division and thes astacted divisions. Completed evaluation of ship except 27 selected ten of B division and thes astacted divisions. Crossed ten of B division and thes astacted divisions.	24 July 2800 3145 3316 3316 27 July 1654 1 Amplet 12 August 12 August	Captain and party boarded ship Captain and party boarded ship Captain and party left the pair. Ode completely executed to Rockeyl, end consistencing lines secured, and the consistencing lines secured, and the consistencing lines secured, and the consistencing lines secured, and the consistence ing lines secured, and the party optimized on 55 Alas (Dr B). Receive exclusion and 30-man boarding party optimized and and and and and and of obstanting like - all engineering species, main deck (optimized of bangs) deck.

### <u>USS\_Endependence</u> (CVL-22) 18 August

Surfaces exposed to weakbar. Reading party left.

2000 Commenced transferring personnel to other untre 200 ceturn to unlied States.

29 August

0900-1320 Bootding party of 41 wen and 2 docilors bearded. Eccepted with inspection of Kidy, opening of compartments, testing for explosive gases, and tadhoau(Sulty Soundings were taken of all voids in en gineering and it and # speces. We command soundings indicating full desage other than slight decongement of locky articles of furnicure.

A 19 August report documented the reflation found on <u>Independence</u> as follows: 0.4 R/24 hours in the followerd U.C. gapp room and tripor and compariments A203-28, A203-18, A202-A, C6001, C6081, (2021, CPS reps was 4 R/24 hours portside and 1 R/24 hours statoondside; compariment C4147 was 2 R/24 hours. C2061 was 3 R/24 hours, C5155 10 scenes of values and 1001, were 0.6 R/24 hours, and C306-38 and C310, were 1.5 R/24 hours.

20 August	Selverdel in <u>dependence</u> . Three rodsafe eminors accessed the 43-aan boarding
0931-1200	persy. Director of Ship Material aboard to in- Spect employering spaces, holis electri
1120	cal systems, and asmanent. Systemated chip.
21 Angusi Nagusi 198	Forty-man boarding party with one tadio
	togical monitor retrieved ship to pump out engineering spaces and close up ship;

- togical monitor reconsided ship to pump out engineering spaces and close up ship; Lopside average 0.65 P/26 hours (Roterearn 1), Boarding party resurged to k<u>imp</u>;
- 22 August (hdepéridendé decomplisationes).
- 25 August Toward to Russialogin by USS Municipal (ATT-1074)
- Doubber Dopolde avecage 0.4 9724 hours (Weier ence 1).

Ob 16 June 1967 Independence actived at San Francisca where it underword decontamination studies Lettin [95].

### US\$ CASKAHUM (DO-696)

file destroyed In<u>graham</u> sound in Destroyed (110) 5300 TZ, Destroyed Squedron 3, under TC (.1 (Suctable Patrol: 375 Lunctions were to conduct oceanographic surveys and do redictogical Henitor ing inside and our-side the Lagoon. \$545 X5(F (1 July, 8960)

- Juty Steaming Independently in area new Polity victor.
   3621 Stopped all engines. Jaying to For put
  - pose of casing ceadings; evidence of stight radioactivity in area
  - 1900 dedeceay.
  - 19\$1 Layang to to take readings.
  - 2241 Laying to to take readings.
  - 2308 Goderway in area about 10 rail (130 km) north, of Bakina to course, outenting, data in connection with CROSSGONDS.

2 July 6100-6501

- 100-0501 Laying to to take uc+anographic readings. 1254 Entered Bibliok Aroli.
  - (3)9 Knyhared to berth 144.
- ) & July Rootane activities.

5 Auty

- L106 Anchored in berth 115, atter sefuelting trom USS Engroe 160 693.
   1908 Redictogical and comensectophic personant lets ship
- 6 7 July Pour line activities.
- A JULY
  - 0857 Underway trok 81ktni isgaen we could to Foldt Wan (stock) 20 who (37 to) month of Biking) for occannersyble Kustwey. 1210 Stopped all engines to begin incease.
  - graphic survey.
  - J225 Cayling to and taking bathylhermograph data every 20 plnutes.
  - Viluiy iaying to, Adjusting position to take ocvanographic data.
  - 10 July Obus Completed bathythereograph readings. underway. 5210 Johned Conestion with <u>May Ajlen R. Sommer</u> (CD A42) and U<u>SS kobert, K. Huntboord</u>
  - 31 Jely 1993 — Mookve to G∰ Chykaskya rati54). 3222 — Anothered in Secth Jić, Bikini.
  - Le Joly 6525 Underway for operating Paint Victor for EAGER als referensel. 1106 Novbored in begch 116.

Underway to Point Victor.

 1035 Johned Correction with USS (addey (DE-724), inclington, and USS Waller (DE-723).
 2042 Layton to off Adrition Colors in conduct reconsistent survey inhearsal (Operation Colorate).

- 20 Daily 1418

15 July 2242

19 2019

1418 Underway for Bikini. 1001 Recharged in Sector Kike.

# USS Ingraham (OD-694)

## USS James M. G1111ss (AGS-13)

37 βαίγ 1790	Coderway from territ 1.54 on roble to Kwajaleoni	) Maigurt	Continued operations survey, stopping as intervals to take soundings.
	····· · · · · · · · · · · · · · · · ·	4 Angust	
24 July		(001	Steaming independently notifiers: of
6 76 9	Anchored in Death Ar29, Swalalain,		Bittin Atol: conducting occorrugt aphic
16-00			
15401	Undertakey Schlaffkährt.		corwhy.
		2638-0925	Condensed preshographic survey, cade
74 DUSY			peapasatsoon for antresting parts.
C157	Statiling to situant topole being fueled	1007	Aprhonet in Seril: Mang Morth
	ty Knoten		··· ··· • ·····
1321	Anchored in Seath He.	<ol><li>And set</li></ol>	
1230	Underway for test BAKER to vacable of	1004	Antitated 10 beats 199-
12.00		1004	HILL WEEK IN DELIG 1999
	Point Victor porth-est of distrib		
		9 Алкран	
tral Stark .	25 Jelr. 6805:	1355 1206	Herelved fuel torn Sub <u>ree</u>
		1241	Aucharwa in Derth 189.
25 JULY			
0950	Joined up with Nantington, Lating, and	(O Nocust	
	Walky Turnuvered to stay an geneta	0114	Undermay to Set Dirgs, California, via
	varinkry of Sakint Island		Pearl Marbon Will Destroyer Squadron /
51.1			warn warsen with deerlower openation 7
, 21.1	Proceeding independently by portation 32		
	nel chau key avith al Makkaza.	Ph. August	Actived at Peacl Parbot.
27740	Stopped will engines.		
2225	Ship dead in the estais Jaylog to Kol		
	lecting oceanographic data for CKDSSRTAPS		J <u>SS_BANKS_M6311186</u> (AGS-13)
	at : rocking Mt.		and the state of t
	as shocking we	1 C	45
		Crew Start,	
26 July		How Man	
2262	Chaloged is some		Departure 20 August 1946
0904	Strengting wardress nowrang to approach	<ul> <li>Localdon Man</li> </ul>	Cho' ABLE - Watto Ato'l (100 nm) [160 km]
	Lukol Pass to collect oceanogenphic and		50.
	radiotogical data.	Constant Ave.	Shu: BAKER, wothe Aught 1500 mmt [160 mm]
3943	Anchored in Luno - Pess.		Sil
		d	
1095	Polor whateboat cliniting ship teebrg		ten Feceloson - San Sharologa
	soundings around anchology by lead line.		Clearance, 13 November 1986
1552	Underway	- Thes' Cleara	ron. To November 1946
1604	Anchored		
1.129	Underway to investigate all sitck 7 the	Rave Usid an	d lunction
	(3, 1 art) much of Hom (claid		why a patheging phip 15 70 1 8.5 (Margery
	On starion between Ham and Irolly Lalanda		The functions were surveying the probable
1649			
	to investigate oil silts for radioactiv-		of the nuclear tests of fish and wildlife.
	114.		wheting oceanographic Auroeys to detection.
1946	Underway .		started of the preas duteening it and around -
/300	Anchored in betth Sugar, Wikini Arbii.	518903	Atoll.
28 July		Shut AFLE I'	Tofat (900)
1569	Osderway shifting burshi .		· . · · ·
1693	Anchored in berth sun in miking, conduct	4 July	
	ing redicionical survey	1490	Bortwed at Mikiol Aroll.
		5.420	Anchored in berch 20/8.
29 July	Anchoand at beach Name conducted sadio		
	Logical survey.	the July	
		27:6	Coderway for a geophysical survey pretion
10			states and the second
70 20(y			off fromy followd.
(270-1)27	Refleted from <u>Englise</u> .	CB/G	Rearchored in Hikkoni Lagoovi.
101	And borest in organ Man.		
:256	Enderway .	17 July	Conducted a geophysical survey off deliver
. 142	Mosered to 035 01056 LAD 141.		istent
1.1		19 3119	Conducted an oceanographic subary off
1 105020	the day way for poster 1344		
0/11	Underway for north 1895.		Adrikan Jalana.
0 ° 14	Anchored in Decit, (89%)		
1645	Radiological party left ship for USS	19 22 July	Conducted constructephic susveys in Sikini
	Naven (All 12).		40000
2 Rogast		Shal PARNE 1	25 July, 08351
2970	"references of supplices the annual total of the second		
	Codermay to tonduct oceanographic survey.	<b>10</b> 1 1	
0901	terning aphy: party methods use aboard.	24 July	the second second second
1.151	Stopped all engines and commenced orders	0529	largeried for Wothe Right.
	graphic countings. They betry throws paper	.525	Arrived at Works Atoli.
	waundings every 6 thet (11 km). Survey		
	mediated westward of siking widdl.	76 July	Sceaned to pergeta Atoll.

### USS James M. G111155 (AGS-13)

- 1-1 August Conducted oceanographic Norveys at Ronge Sap Kroll.
- 4 Acçusi Obti Soft for Biking Atoli. 1400 Accied and anchored at Bitini Aroli.
- 20 August (101 Departed for Pearly Bathat)
- 1 September 0925 Accived at Pearl Hatbox.

#### USS JUNH & ISH (AGS 10)

Crow Size 48 Bikloh Atoli Archyg<sup>h</sup> 16 Mirch 1946 Bikloh Atoli Departure 20 August 1946 Shat ASIF Localion, Off Berok Eviand Shot BANER Location: Anchored at Rengetar Acuil Decontamination furation, San Franchisco Operational Chearance 15 October 1946 Final Chearance 22 November 1946

Functions and fave Unit Billoh Mas a purveying ship used as a suggest whip in TO 1.8.5 (Survey Unit). its functions were to survey the probable rifects of the number teams of fish and withing and to determine the charge bed of the scenn currents in and around Billon Atol).

Shot Jelt 14 July, 0900;

Riish anchored at Robgelep Acoli before shot ARLE.

L July	SteamAd to an area off Buruk Island
K528	Reanchored at Rangelap Acoll.
4 Duty Grig BSCA	Separand for Making Jacobi. Anchored at Bildon Judii.

- 6.9 July rateful rest bits[outre) surveys,
- [1-14 Judy Conducted ecoarsquarkite surveys.]
- 17 July Departed for Rongelay Acoll.
- 18 July Actived at Rongelap Acoli.

Sev Atoll.

- Shet BAK10 (25 July, 0025)
- 25 July
   26 July
   26 July
   26 July
   27 Account of Rongelap Atoll
   28 J0 July
   28 J0 July
   28 J0 July
   28 J0 July
- 31 July 0600 1737 – Conducted a geological varyey at Pongelap NCOTI. 3832 – Badetway dat Atkini Roobi.
- 3 Nugati 6055 Anchored in an unidentified berth at (40101 Anal). 0660 Greenwy is tailed bottom samples of the ingoun.
- 2 August Collected bottom samples of the Jaggery

### USS Kenneth Whiting (AV-14)

- ) August Conducted an orderrographic survey of the lagoon, tewn auchored in an unidentified heith
- 5-19 August Conducted Oceanographic surveys of the lagoon
- 12-13 August Took bottom samples morthwest of the lagonal
- 20 August Departed for Pearl Harbor.

#### USS =[HA4]14 ==4]TING (44.14)

Erew Shae. 539 Birthi Atol: Arrival. 28 May 1946 Birthi Atol: Ceparlore: 14 August 1946 Shot Amil location. 10 to 1: man (19 to 20 km) 4 Shot SAKER location is each (28 km) t CesonLaminalian Location Los Angeles Uperalional Clearance: 11 Decomber 1946 Final Clearance 21 December 1986 lask Unst and Lunclion Whilifug, a sompleme tender, was used as a support phip in TG i.1.2 (Instrumentation). Its reaction was to house and support the scientific personnel. Shot Adle (1 July, 0900) 1 JU1y 4505 Envs personnel case aboard, being evacuated according to Ab;R plan. 0506 Bikin: personnel came aboard. Underway from Serth 55. Bitshi, to area 0525 Craham. а Лав. And lond on Scatton on Stree Grahee. 1552 Aschored in berth 55. Blaint. 160% free and bight parties left ship 16.14 Anchored in Swith 146, Hikhail, 1960 ases and Bakini parities recursed to ship. 2 July 310 archoired in news 55. Askins, 9 JUTY 0921 No. 2 COPE returned demaged to ship. 3-24 2419 Reating activities, not shoolyed with Latdet vessalt. Shot \$44(4 (25 Jaly, 814)01, 0855) 25 JULY Bistol Island personnel reported on 6462 board. 6505 Energi island perspecial separated on heard. 0511 Onderway from berth 55 Arrived on station. è mai (16.8 kml from 6724 Poter Auto. 1160 Anchored in Letth Choe, Biking 28 July 1612 Shifted to perch 265. Bilessi. 29 July Anchosed 500 yards (455 meters) due west 0913 of beech Abin, Bikini, AD July

:001 Anothered in perih 55, 31kin1,

# USS Kenneth Whiting (AV-14)

A Roguna (6:2	An bosed as berth (52), Runjer	27 July	Anothered in Serth 378, making cadiology onl taxis of the water of the Jagoon.
7 August		25 July	
2010	Unchronical Station of Milling Report.		No losses ha busch stabl
1010	Whitewood are period with unreader.	1000	Underway to Death 155W
		:095	Atchored in beach 385W.
la August			
0844	orderway from 91king en route to reall	29 July	Anymoled in Secto 1658, engaged in making
	Hastwar	•	ensity for tachpartivity in the water of
			the lance.
4. 4 4			
.4 August		26.50	Secured radiological observations.
C45)	Noozwó az Avari Harbor.		
		10 (Juliy)	Anglaged in bench 140%.
	USS [#17] + 100 774]	<ul> <li>Acquest</li> </ul>	
	<u></u>	:428	Recorded in Section Real South
Crew Star .	16.7		and services for the service forder of
		- ·	
	Afrikal & Jore 1946	o Auguse	
Status Atoli	departure. 10 August (240	0:40	Statemeny to readors (aring practicey.
-5tes AB.( 10)	cation. 19 mai (35 km) Milliatha Fudkori 🦷	9.135	Abovered by Detty New South.
	acathon 14 mmb 126 km1 FMI		
	an terallen - San trancisto	1	
		<sup>1</sup> August	
	Clearances, 7 November 1946	36 AC	Averageed in Decision 1407.
<ul> <li>Indi Cleanar</li> </ul>	nte die Seterber 1946		
		9 August	
Task Deep and	4.6	2976 (0) a	Took on feel from CSS Encine THO 601.
	reover latter served in Destroyer Squadren -	1925	Underway .
7. ft. 1	." photece fatistic fits there have no -	10.58	Andlered in Depity (43%)
<ul> <li>applicant</li> </ul>	constructions in a service work of the fract red to		
	notifiering during the operation:	(C. August	
1.46.61	restricting carrier operation	0751	Defense of Sec. State ( State ) and the
· · · · · · · · · · · ·		0721	Underway to San Diego, Calllocela, via
shal Jere (1	50.9° CAD3)		Pene) i Bla ('See .
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1 July Oy49 5 July 9 (5 July 16 July 26 July 26 July 12Ju 26 July 12Ju 26 July 12Ju 28 July 0614 0612 23J4	<ul> <li>Lagoun</li> <li>Underway for radiation/and patent</li> <li>Anothered in teeth (00%, U(kin) A(0)).</li> <li>Conducted incomplete Nurveys could of p(vin) A(0)).</li> <li>Left the Carbot for allows outside the Lagoun.</li> <li>Rearchored in the Lagoon in Dects 386.</li> <li>Underway with (05% 0 Bright (10) 00%) and (0% waise 400 023) for area Hulson outside the Ingoon.</li> <li>Steaming in company with Maike and D Height.</li> <li>Steaming in company with Maike and D Height.</li> <li>Steaming in company with Maike and D Height.</li> <li>Charmanical steaming to remain by area Hulson Companies defined in the Ingoon.</li> </ul>	<pre>(t August (') # August (')</pre>	Arrived as Real Harbor. USS LANSON (05-201) 10 Arrived Before 20 June 1944 107 Shot Ad.:. USS Hermito (APR 45) 107 Shot BAKEP - Animous select (alian 162 pards (641 metris) KM 1965, C'Anri Atol) 0 function troyer batton was a nature vessel during 185, Jos mean was eventated before shot d termin million. It shaved be Destroyer 5 (of To 1.2.3 (Destroyer Unit)) USS 1946) was meanized to geoly of before the detens 439 (argung point as a result of what ARCK Lions were later conducted for examination 25 July 08351 was dispersive among values lask force
1 July Oy49 5 July 9 (5 July 16 July 26 July 26 July 12Ju 26 July 12Ju 26 July 12Ju 28 July 0614 0612 23J4	<pre>lagoon Underway for redShippinst patch Ancharved (a Swith (40%, U(kin) A(4)). Conducted accomplexific surveys south of pSwith Appli. Left the Carbo: Sol alcos outside the Lagoon. Avanchored in the Lagoon in Dects 386. 25 July, 3836) Underway with (355 0 Stilgt 100 30%) and CSS waite 400 323) for area Subon our- tive the Engletic Steaming in company with Kaike and D Heim. USS_lowny (00-710) (struct formation, Lowey and Officies left formation, Lowey and Officies left formation, Lowey and Officies left formation, Compensed steaming to remain by area States</pre>	<pre>(t August (') # August (')</pre>	Arrived as Reall Marbor. USS LAMSON (D3-361) 19 Arrived Before 30 June 1941 10 for Shot Ad.: USS dentice (APR AS) 10 for Shot BAKEP Anitous seles (alian 162 pards (611 metrics) KM 1965. Eikhri Atol) 0 function troper Barson Max & Latyer Vessei during USS Dis rise Mas evanuated Secore stod d tevel related. It served kn Destroyer 10 for Th J.2.3 (Destroyer Unit). 20 ja 1946) Max Macualted to teols of Nethods the detena USS 1946) Max Macualted to teols of Nethods the detena USS Merce Later conducted for examination 25 July 0831)
1 July Oyno N July (20) 9 (5 July 16 July 26 July 26 July 1200 26 July 1200 25 July 0614 0802 2204 1900	<ul> <li>Lagoun</li> <li>Underway for radiation/pathol pathol</li> <li>Actioned in testin (075, 0)(kin) A(0)).</li> <li>Conducted inconnegraphic surveys mouth of phinth Argil.</li> <li>Left the barbot for dream outside the Lagoun.</li> <li>Seanthored in the Lagoon in Detth 386.</li> <li>Underway with 055 0 Stign (10, 005) and (35 mailer 600, 023) for area Subson outside the the ingoon.</li> <li>Steaming in company with Mailer and 0 Main.</li> <li>Steaming in company with Mailer and 0 Main.</li> <li>Steaming in company with Mailer and 0 Main.</li> <li>Company (00, 7%) (pined formation.</li> <li>Lowy and 0 Diring left formation.</li> <li>Companied demoning to remain in area (taken</li> <li>Companied demoning to remain in area (taken</li> <li>Companied demoning to remain in area (taken</li> <li>Companied demoning to remain in area.</li> <li>Steaming singly wear of Bridgel Aroli.</li> </ul>	<pre>(t August (') # August (')</pre>	Arrived as Real Harbor. USS LANSON (05-201) 10 Arrived Before 20 June 1944 107 Shot Ad.:. USS Hermito (APR 45) 107 Shot BAKEP - Animous select (alian 162 pards (641 metris) KM 1965, C'Anri Atol) 0 function troyer batton was a nature vessel during 185, Jos mean was eventated before shot d termin million. It shaved be Destroyer 5 (of To 1.2.3 (Destroyer Unit)) USS 1946) was meanized to geoly of before the detens 439 (argung point as a result of what ARCK Lions were later conducted for examination 25 July 08351 was dispersive among values lask force
1 July Oyno N July 9 (N July 16 July 26 July 26 July 12JJ 25 July 0614 0614 0614 1993 2204 1993	<pre>lagoon Underway for redSh(opinal pate) Abstanced (n Get(b (0)*, 0)(kin) A(a)). Conducted accomparation surveys houth of phint A(a)). Left the tarbot for stoke outside the Lagoon. Seanchored in the Lagoon in Decth 386. 25 (a)y. 3836) Underway with 055 0 Stright 100 (0%) and 0% water 600 023) for area Sulson out- tide the ingent. Steaming in company with Moike and 0 Hoigh. USS (compary (00-710) (comparised Sulson out- tide the ingent. Steaming in company with Moike and 0 Hoigh. USS (compare (00-710) (comparised Sulson Companies Steaming in remain in area Sudson Companies downwind pation, https://www. Compared downwind pation, https://wwww. Compared downwind pation, https://www. Compared downwind pation, http</pre>	<pre>(t August ('rew S'se gUk'r1 Ats ' Thew location Crew location Stot A5.5 .ee Sank 3 (01) ('fe des</pre>	Arrived as Reall Harbor. USS LAMSON (D3-361) 'ig Arrived Beicre 30 June 1944 'icr Shet Adii. USS dentics (PAR Adi) for Shet Adii. USS dentics (PAR Adi) for Shet Beicre 30 June 1944 'icr Shet Beicre 30 June 1944 (icr Shet Adii. USS dentics (PAR Adi) (icr Shet Adii. USS dentics (PAR Adi) 940. (PAR) O function troper termine Max & Larger vessel during USS. Jis mine Max e Larger vessel during (icr. Jis mine Max e Vermitte (icr. Jis mine Max e Vermitte (icr. Shet Larger) pack as a result of whet Adix (icr. Shet Max e Later conducted for examination 25 July 0831) may dispersive among variant task force (icr. 21 327)
1 July Oyno N July (20) 9 (5 July 16 July 26 July 26 July 1200 26 July 1200 25 July 0614 0802 2204 1900	<pre>lagoon Underway for redShipping pater! Anothered (m Depth (00%, 0)(kin) A(0)). Conducted nocehographic surveys south of pSy14( App1). Left the Carbo: Soi alces outside the Lagoon. Avanchored in the Lagoon in Depth 000. Stanchored in company with Maike and 000. Stanchored in company with Maike and 000. Stanchored in company with Maike and 000000000. Stanchored in company with Maike and 00000000000000000000000000000000000</pre>	<pre>(t Riegus:</pre>	Arrived as Real Harbor. USS LANSON (05-361) (19 Arrived Before 20 June 1944 (10) Shot Adds. USS Herrico (APR 45) (10) Shot Adds. USS Herrico (APR 45) (10) Shot Adds (10) Herrico (APR 45) (10) Shot Adds (10) Herrico (APR 45) (10) Shot BARGP Animous Prior (10) Shot BARGP Animous Prior (10) Shot Barson Mass - (arget Vessei during USS, Dis mass was evanuated before shot d never related. It seaved to Destroyer (10) 1946) as evaluated to Media a result of whit ASCK (10) Shot Barson are a result of whit ASCK (10) Shot Barson areas a result of whit ASCK (10) OBS) (2) Jag7
1 July Oyno N July 9 (N July 16 July 26 July 26 July 12JJ 25 July 0614 0614 0614 1993 2204 1993	<pre>lagoon Underway for redSh(oping pate) Abstanced (n Get(b (0)*, 0)(kin) A(a)). Conducted accomparation surveys houth of phint A(a)). Left the tarbot for stoke outside the Lagoon. Seanchored in the Lagoon in Decth 386. 25 (a)y. 3836) Otdorway with 055 0 Stright 100 00%) and CSS waite 600 0230 for area Sulson out- tide the ingent. Steaming in company with Moike and D Hoigh. USS (company (00.47%) (ping) formation. Lowly and 0/Brieg left formation. Companied steaming for remain in area State Companied downwind pation. Norweing charge of Hiktor Anall Steaming singly wear of Briegh Brack. conducted rabelogical safety pate).</pre>	<pre>(1 August (1 August dikir1 Ats ) Them is said to Grew is said to Grew is said to Grew Shill is Shot Att : Shot Att : Shot Att : Shot Att : Shot Att : Shot Size is the free said. Shot Size is Crew Size. 1 Ether free said. Crew Size. 1 Ether Att : Crew Size. 1 Crew /pre>	Arrived as Reall Harbor. USS LAMSON (D3-361) 'ig Arrived Beicre 30 June 1944 'icr Shet Adii. USS dentics (PAR Adi) for Shet Adii. USS dentics (PAR Adi) for Shet Beicre 30 June 1944 'icr Shet Beicre 30 June 1944 (icr Shet Adii. USS dentics (PAR Adi) (icr Shet Adii. USS dentics (PAR Adi) 940. (PAR) O function troper termine Max & Larger vessel during USS. Jis mine Max e Larger vessel during (icr. Jis mine Max e Vermitte (icr. Jis mine Max e Vermitte (icr. Shet Larger) pack as a result of whet Adix (icr. Shet Max e Later conducted for examination 25 July 0831) may dispersive among variant task force (icr. 21 327)

## LC1-327

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(rey Longalow For Shut AGLE – USS Bayfield (APA-D3) Cree Lotation For Shut Batta, <u>Baythrid</u> Shut Adli Latation: 2,441 yards (7.3 km) E Shut Adli Latation: 2,443 yards (7.3 km) F Suck DG Ox(UDPA 1943 near Swayalohn Atoll

- lass into and function. LC2-327. a landing craft infentry whip, was a cas get weased during UNIXERSADS. Its crew was everyared before shot ABCE and did not return. It served in SCI Group 1 of to 1.2.5 (Landing Coal) 15111

Shok ARLI (1 Duiy, D900)

- L July
  - 5552 Test animals were rewrited (non impossile Sectored ratiologically elear (Refreence 1010 ye. B 12 atul d 13).
- 2 .3019 5520 ALL hands seboaticed ship. Concerned the spection of only to determine damage.
- 3461 EACLA 175 JULY, 08355
- 27.0034 A boarding party returned from LCI 027 (Reference 6, y, 1-2) PL Unable to re-tells aboard boxsuse of radioanityly. 1.4
- 78 Judy
  - scorded by another scanding teas. Unable 5617 to remain aboard because of cardinactiv 129.0
    - washed down by USS Curtont (ARC 22) using a migh-pressure hose (Reterance 5, p. 1450 Cli: Heference 6, p. 1 32 Br.
- 29 July Nasiwi down again (Melérence V, p 1-18-11), Onable to retward because of 5025

radioacrivity.

- Sts tiew was aboutd USS Rockbridge (APA-220) between 2 and 28 Regist and later dispersed to other ships.
- September Towerd to Kwalainth by ATA-550 and stranded on Rescouby Saland Loss' in watsuch:

#### LCE-329

Crow Stael 16 SIKANT ALO'I Arraval Beturn TO June 1945 BINNOT ALCEL Organiture 24 August 1945 Grew Locathon For Shat ASLE USE Bayfield (APA-30) Grew Locathon For Shot BAKSP Bayfield Chot ABLE Lo:alton: 2.892 yards (2.6 mm) f Shet (AkEm facation: 3,266 yards (3.6 mm) !Mt Sunk 16 March 2948 near Kwajatean Aloli

lask Unit and Fearshon LCL 329, a landing craft intensity ship, was a ratget scale during CASSROADS. Is crew was evacu-ated before ARSB map and sever relating. It criwed in LCE Group / of TV 2-2.5 (Larcing Claff denta in tra

Shee #824 (\$ 30%), 0900;

L July

- 1417 Declared radiologically sale (Reference) 6, pp. ( 9 A and 1-19 A).
  - 184. Perissed fadiciogically male conferment 6. pp. 7 9 A and 1 10 A).
- 2 July 1552

Tout onjusts were reasond from topolde. Reported to be clear of radioartivity 1610 (Reference 5, pp. B-12 and B-13).

- Initial damage control term absord with compareding officer. Therough inspection of the ship began. 1800
- Shot BASER (25 July, 0635)
- 25 July 1276
  - Clowered for Guarding (Owingman 5, p. R-LET.
  - \$505 the Initial team camp aboard.
  - Declared Genger sour (Peference 5, p. 5-34: Reference 6, p. 1-13-B), 1579

27 Jely

- 0855 Cleared for bearding.
- 28 July **₽**3Z3 Rearded by an intrial teas. 1952 Declared Golges tweet (Belezonse 5, pp D-24. D-30. and D-347.

Its crow was represented to USS\_Parkbridge\_(APA-728)

- 10 Require 5930 Diliters and stew solutions to ship.
- 2¢ Augusa Lett Bighti for Wahalojn. 0740
- 25 300001 5400 Anchured at Kwajalein.

#### 161-337

- Crew street 17. Staint Alott Artival - Before 30 June 1946 \$181n1 Atoll Cepi: Lone: 3 Suptember 1946 Grew Cotation for Shot ABLE. USS BayField (APA-33) Grew Cotation for Shot BAXIR. <u>Bayfirld</u> Shot ARLE (arathon: 2,215 yeads 12 km) SSM Sbot BALER Location: 1,030 yeads 11.7 km/ ( Sonk 30 September 1941 near Kwaja'eta Alcii
- Taxe Boll and Fusition ACE 132. A landing craft submury ship, was a tail get veskel during CHIXEREADS. The crow was even up ated before ABLF and never resurged. It served in sol broup 7 of to 1.2.5 thending Craft Unites.

Shol 4815 (1 July, 0300)

J July i 4 1 9 USB Fileb (AN-79) exported a small file. account ICE 132 (Reference 6, p. 1 1) Ab. 2 մանդր āssa. Team A. two officers, and eight polisted men reboarded and inspected ship. Reguested that recalader of cover setucafrom evecyation transport.

Shot BARIR (75 July, 0835)

Crewmechers were annead shap for unperified annuals of the Guring I to 2) Murgust. The crew was later dispersed to various task force units. On 29 August 201 329 was decomplishicted. It was towed to kwejelean where it was used as part of the ship security detail until 22 ambs way 1947

#### LC1-620

C-em \$178 16 316365 Atult Acrivati Betate 30 June 1986 15.6 EMP END Shot MALLA colation: Beached, \$144n1 (sland, 2.25 pm) (5.1 km) ML

- Sunk 10 Agoust 1946, at sea off Blutni
- lask unit and function WCI 620, a landing deate intentey ship, was a targot weakes duting CROSSROADS. 115 FEEN HAS evacuated before ANLS and never returned. It nerved in ICE Group / of TJ & 2.5 (Landing Craft Unit).
- Shat 48.1 () Sely, 09003

Crew was evaluated to Bayfield before the decomption. 103-b20 was beached at side 17 on Sikjan Island.

Shok BAR[\* :25 July, 0835)

Grew aboard <u>Bayfield</u> during the decomation, 1.01-620 was beached as slot LT. Bikini, the order was emissived on USS Ro<u>rbacidge</u> (AVM 228) between 4 and () August and on recanned target ship 355 Fillacte (APA-81; between 14 and 22 August. Crownrebets work aboard LC: 620 at Various thmost daration unknowns, doring the period of 10 June to 7 August.

#### 1011.1-549

- Crew Stat. 22 ETRIN (01) Arrival 1 June 1946 ETRIN Alo11 Departure: 24 August 1946 Crew Location for Shot ABIL: USS Bayereld (4PA 32) Crew Cocation for Shot RACEP BayEreld Shol Able Location: 4,553 yards (4 2 km) L Shol BAKER Location: 3,933 yards (3.5 km) (k) Decontambration (ocation - San Franctico Operational Clearance: 4 Agril 1941 Final Clearance, August (748 Finel Disposition. Sold 19 August 1949, private DUCK NAME
- Fash Units and Function LEINLY 549, a large infantry landing coaft, was a target vessel during 2005500005. Its crew was evecuated before Aden Lingt, 11 mas a member of TU 1 2.5 clanding Craft Unit1, 101 Group 1.
- Smot ABL: [8 July, 0502]
- 10 June Crew everysied to Bayf(eld.

- י <sub>עלטק ו</sub> דוין USS Erlah (US-79) (Team 7) ordered its tees aboard.
  - 1649 Etiah case alongside and the boarding team went aboard.
  - Declared Gelger event by Stlab (Reference 1355 5. pp. / 1 A-8 and 1 1-8-9).
  - Declared lices of radiclogical contaeira-1610 sion (Reference 1, p. vj-0-32).

Z July

1632 Boarded ship and inspected for demoge-We damage except for a shaken galley and states.

Shot Bakik (25 Jung, 0895)

25 Ouly

- 1107 JSS (Jamp (ARS 33) reported a boarding read aboard.
  - :015 Reported Beiger samet (Reference 6, pp. 7-1-8-8 and 1-8-8-9)

28 July 1952 Reboarded and reported Geliger sweet by the DEM (Reference 5, p. V1-D-34).

LGIIL)-549 suffered no material datage from what BARAN (Sefetence 2).

- C August Reboarded.
- 24 AUQUET
  - 0751 Lett Bikink to: Mesjebeim.

25 August

3393 Accived at Residein, where D construct as part of the ship security detail until June 1948.

#### 101(11-6)5

Crev Stre. 16 Blaint Atol' Arriva's 1 June 1940 Bikthi Atol: Ceparture. A September 1946 Crew Location for Shot ASLF: LS<u>Say</u>fer's (APA-33) Crew Location for Shot AAER: Bayfer's (APA-33) Shot ABLE colation: Slot (4. Biblet Js:and, 5.50) (6 Shat BAKER Location: Side in Side is solved, 5:30 to b.OCC yaids (S to 5 S km) ME Shat BAKER Location: Side i 4, Bikter island 6,000 yards is 5 km) ME of center sidey Decontamination Location: Sam Francisco Operational Cleanador: 30 June 2941 finel Clearance: 17 August 1948 Finel Disposition - Sold 19 August 1949, private no?? have

- Task Units and Lunckion Unit(1.5-655) w large infantey bandling coaft, was a tacone vesnel for CSCSSHOADS. Its crew was every ared before each shot. It was a member of TU 1.2.5 (nembers Conf. Unit), 2017, it was toaded with ammunition and stores (Peference 1)
- Small ABLE [1 July, 8400]
- : July Deached in sick #14, Bikini Island, All officers, ben, of necessary year on board Bayfleid.

) July

Examiniting officer, executive officer, and six set rebeated LCCCC-615 with 151£

	necessary seboarding gear. Upon refinand-	1.120	Anothered to beeth 60.
	ing, ship thend to have seen inored, wan-	1409	Commanding officer, executive officer.
	dalized and in very dirry condition		and two own lett ship to get remaining
	Machinery still in good condition. He		commentations, non-men left aboard.
	Wheet downge resulted from the RHLE	1705	Reastning contexters came atomy with
	detailst for		ALL necessary gear Commanding officer
:600	Commanding affices, executive affices		and executive officer boarded das work
	and six men evacuated the ship. Compand		beloge (APA 728) to receive meshages per
	the officer reported veroally that the		fairing to operations of LCIGI 615
	ship had been locied, vanklaitzed, and was		
	to work the condition to give on, after the	/ August	
	reports where made, officers and sen re-	6407	Commanding alliest and executive efficer
	turned to Payford with reconsisty geat.		nearded.
12 July		) August	
0815	Security during destroying of four see to-	10%5	Monaron te uss Phyten (AAR-3)
	boarded ICLID 015 with necessary oras		
	by other of the commanding officer.	August	
		1502	Entered lord drydack.
15 July			
0.900	Executive officer and five men to tetleve	B August	
	security watch reported aboard by arder	1510	Maneuvered to get out of diguark.
	of cotmand(0) of Diet.	1605	Moored alongside AND 29
1230	Executive officer and Laur Mon 1411		
	LCIH) 615 to rebeard May(teld, #)un-man	0 August	
	security watch new abcard.	2230-1248	Teet on water free USE Wildcat (AM-2)
		2281 (325	
17 July		1610	Anchored So berth K# Worrh
0515	Rebeached ship.		
6540	Made second accept to approach ship.	10 Анкраст	
	Starboard aarbor fooled, Inavion H in	1421	Nachorgé Sa herib y?
	operative.		
2915	commanding officer and foot crownerbers	15 August	
	reported stassed	1357	Trave whole of 60 km genericators
1317	Assempted to disengage line fouled in	1.155	Anchored in Derth (OBA
1.156	starbuard scien.		
L 400	Miledapt understandes (ul.	(6 Jungur)	
1455	Reliacted from peach.	n8•0	Cody may to go Alregation (ange) and p 1985
2505	Maneuvering off beach as Mirini.		Hugford (EC-)891
1:00	Naking preparations to rebeach.	Balc	douted aborgsiste hassfuld.
LīJA	Reached while in what will	10,98	Geol off from Kugford and underway to
\$155	Commanding officer and ther caremenions		target ship USS Stack (D0-466).
	leff ship for Hayfield	1155	Moored aborgside Breck.
ND		1845	deservery with Stock measured alongstide
γίας <del>81</del> α\ία	Florenza contrada de el lada	1658	Underway to anchervoy Anchored to berch Li.
0170	Flue-wan security detail inte.	18.50	MERCIPAL MERCIPICITY
Nº July		17 Juniorati	
1535	Six man security detail reboarded ship.	12.80	tinderway to go alongside Lasger ship USS
1000	are had secondly envires repositive stup.	Dar.	Nevala (151 %).
22 July		0853	Moosed alongside hervada
1330	Three most of the six two security watch	1542	An boyest in bergen volk.
	wachated to Boygleid.	1.144	surveyings in False Phylic
	reaction to polyient.	19 August	
24 July		17.00	Anderway to go aroundor tanget only
04.60	Three has security watch with recessary	0411	Pennsylvaris (FB )8).
0420	gear evacuated re Bay!!esd.	D940 1458	Meared alongside Dennsylvania
	den concerte editeren	1519	And horized for parts 1094.
SHOL BAKER I	25 July, 08351	171*	
*·· • • • • • • • • •		20 August	
Peached in	slow A14. Bikini. Add officers. mes. and	0000	zbouwd alongside nes Palmyra (APS[1] 3)
	alphent or board Maytivid.		the second se
	aller a state aller a	21 August	
<ul> <li>Acquist</li> </ul>		0840	Record to target ship this West York (ML
DBCC	Commanding pitaces, executive offices.		341.
	and four even remoarded LCS(L) 615. Ship	1110	Underway Irom New York.
	found is good condition. All lines had	1259	Annhored to berth SCBN
	parted and ship was floating approx5		
	mately 200 feer (b) merers) from shore.	23 August	
1200	Checked while the damage. Yound steen	<u>йч</u> г9	Underway to fountsh electrical power for
	winch tadbate: pushed back against cool		Latger ship USG Rughes (00 410).
	10g føn.	0940-1530	Hoosed to suggest.
1251	Underway to object to berth 44.	1145	Anchored in Derth (188

- winch caddato: pashed back against rool ing fan. 1251 Underway to obcost to berth 44.
  - 347

Anchored in Derth 1188

## LCI(L)-615

## LCI(L]-1062

24 August		E CORDANE.
Sec /	Country enterney for refuser correction	5 September 1145 Heared alcogude tables vessel (2000) 549.
0652	Genting underway for selvage operation. Apoped alongside (aspet slip 1199 Politico	1145 Meared alongide tanget vessel (2000) 549.
	HARA SLIL	
:205	Undermay	LCS(L)-917
1225	Anchored in beach 1988.	Concersion and a second s
		tree Street 15
25 August		Bishel Ata'l Arrival - 8 June 1946
C#30	Underway for beivage operation.	SHAhr1 Ato'l Geparture: 77 August 2986
C442	Hoored Alonguade target ship USS Mayrent	Shot Walt .pcation: Kunfaiolo
	(10)-4021. Supplying proof to each an	Shet MAKER Logation. K-stalahr
	ttot.	)A, of tannast bur location. Guan
1504	Underway	Final Clearance - 2 Parch 1942
1270	Anchored in berth 1088.	
		Task Unit and Exercise
Je Kagise		UCCC: 9712 a large intentry landing craft, was a
C#20	Codesway to perform sulwage operations.	worker of the Libia (Dispatch Nost and Breat Pool).
2042 1:10	Noorest to carges andp <u>150</u> Russi <u>in</u> (MC 413)	Its function as a support ship was to provide dis-
	to furnisar electrical power.	patch and make service. Interatule freight, and
2110-1126	chotenway to facility anto 1.00 Hollow (C)	helaneschet keiter, sei
	404) to furnish electrical power.	
110 1909	Alongside koind.	Shal Able (" July, USDO)
325	Authored in beset (CAN).	Annales and the second s
1412	Jodesony for salange chesni 100,	Apphoned at the Jalein.
:435	Mouted to target ship JSS Raigh Talbot	Court Blance (M. B.) and a
1657	(BD 390) to teal in anomatic Management is eacher	Shol BARE? (25 July, 4093)
104	.bidecowy to Anchor. Angaoteg (o bestb. 179	horboxed at Kingale'r,
1.000	and an end of the second of the	Harrish Har at Kangare at
19 Anapost		3 Augus:
1728	Sadsafe wonitor aboard.	- Bayson 35.05 Entered Bilten i Lagoon.
1.14	Anderway for Selvage specation.	1125 Anthone in an builder C.
1715 2002	Monreel to target resourt (T (113 to parp	
	taliası.	14 August
2014	Annahole's in beach 124.	0517 Shifted bettes and method in Broth
		2518
10 August		
0905	Underway to move alongside Paloyrs.	22 August
0922	Nooret se <u>Paymysa</u> .	2645 Lett Bakthi Lagoon for Kwajaleon.
2355	Cast off all lines, underway.	
1415	Moored to <u>75</u> 5 Recl <u>aime</u> r (ARS 42) 10 take	
	an salwega ecusprent.	
		.CI(LI 1062
2537	Anchored in bests 220-	
2597		free Steet 35
1537 1 September	Ancaused in bests 220-	(rearšice: 35 B:k\n" A!oli Arriva' ≥ Mag 1986
2537 1 September 2506	Antipped in bests 220. Gränning in perform valvage operations.	Erea Silen, 35 Bikhin Aloli Arriva' - 2 May 1946 Bikhin Aloli Defartanon 22 August 1946
1537 1 September	Anchored in bests 220. Gränning die perform valvage operations. Hoosed alongside caujer vermet 2001-918	Crew Siter, 35 Bikhni Aloli Arrivai – 2 Mag 1946 Bikhni Aloli Departaron 22 August 1945 Shat Adlé kocattor: Rwakalein
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2537 1 September 2620 2620 2620 2620 2623 2 September 225 225 225 1255 1436 2510 1436 2510	Anchored in bests 120. Griderway to perform valvage operations. Hoosed alongside caspet washe, LCT-910 to pulp excess Vater oct. Inderway to anchor Anchored in best 50. Underway to dob <u>widgets (ASR-1) (n' sal-</u> unge operation. Lsying to off <u>Widgeon</u> for valvage opera- tion fromeeded to anchorage Anchored in terth RA. Proceeded to anchorage Anchored in terth RA. Proderway to periods salvage operation. Inderway to periods salvage operation. Underway to periods salvage operation. Underway to Enou Island. Laying to off Widgeou, wady to glow aid in submatine salvage operation. Underway to Enou Island. Laying to off Bridgeou and saking pro- perations to the torget vessel ATT 510 off the besch. Commonwel Insteing Dim Alts off beach. Anchored in best's 50.	<pre>(rew Site: 15 Bikin' Apoll Arrival P May 1985 Reader Apoll Departure: 22 August 1985 Shit Add Accutor: Readatein Shit SAEP Location: Environ Firm Picturi to Fongelap Pecertamisation Longtion: Guam Innal (leandrie Sy 4 January 1941) Tark Unit and Function Infantey Tandard cost, was a member of TO 1.0.: (Stepart) Boar and Boar Poil) As a support ship, it provided dispatch and well survice, anteratell feedght, and parmen get receive. Site: AB.4 (1 July, Jano); At Readatein. Site: #Amin (25 July, 0895) 21 July 0245 Entered BikinS Lagoon, 1011 Anterpred of Ency Saland.</pre>
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### LC1(L)-1062

17 August 5175

## LCI(L)-1091

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0100	Reentwood Bights Laguon and anonorma in	1942
	nesth 61.	
		19 August
16 August	manual to the best between a start	0650
ES69	Perurned to the lagoon because of peob	22 Appunt
	Seek with Les propelies shalls after var- Lous attempts to get underway	0746
1737	Anchored in serie 44.	0851
72 August		23 August
0904	tesa Bikini Lagoon jur Webjalelu.	1919
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l July	Fo seate to mawjajet from Bakins et tame - of shot Adum.	101-7
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		1 July
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		b July
3 August 1215		1240
(25)	FALWING PARIAN ANGRAM Waared partside to USS L2T Sol.	A 101A
1046	Xoored to USS Milden (Mm 2).	0917
1852	Anchored in besits 365.	1316
< hugust		6 մայի
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5312	Moured to yes: Let 388 to Lake on Catgo.	10 July
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		1023
9 August	H	
577 ·	Moored at Emeralsin.	IE July
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52 ALQUER 6530	Suderway from Weijsheim to Bikini	13 July
100	evention the second to present	11.12
11 August		
0180	Anchored at Bikini.	19 July
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0404	itiderway (rds pikiti to pusjelein.	20 July
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Rooted to N.O.M. play, Resjutete

8 Nagast 1942	Underway for Sikini.
9 August 0650	Aschored in Bikini Anoli.
2 Abgust 074A 0851	Underway for Wasjalein. Left Biblin: Layoon for Wasjalwin.
3 August 1910	Archared 14 becth 29. Meajalein
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b September	Koored at Quas.
	LCT(C)-2091
brani Alph: acation For acation For econtamination	S Arrival IQ May 1946 Separture: 25 August 1946 Seut ABLE: Kwajalein Seut BAKER: Pangelap Atail Se Ipcation. Duam Ce: Essimated II Gecenter 1946
a schoe Pooti, f	Function G9J. a Large Solantry banding crate, was t of TV 1.8.3 (Dimyatch Yust and Doat ) provided for disparch and mails service. b) freight, and passenger service.
hat ABLE ()	Joly, C900)
עוטנ	Anchored at Kwajajeir for shot NBLB
July 1240	undorway from kwajaležnise kikini.
JULA 0831 1310	Moored in North 56%, Bikins, Anchored and shifted betchs.
Julγ 0545	Underway from RELine to kwajelein.
July (133	Moored to N.C.B pier. Resistein.
9 2019 0630	Underway from Kwajalchn so Bikins.
1023 1053	moored at Diking.
6 July (1622	Underway from Bikint to Kwajaleto.
y 100 y 1137	Mooted to berth A44. Kwejalego.
9 JULY 9 9 (90	Underway from Knagetadri bo Mikani.

27 July Oble - Underway flow Hittini ro Kwajaloba.

Boured to perth 56%, Mikipi.

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## LCI(L)-1091

27 JULY			U <u>SS ((14 500)</u> (14 50)
1935	Anchored in barun K-11, Kwajalein,		
	· · · · · · · · · · · · · · · · · · ·	Crew Shire.	244
Shal BAREA ()	5 JULY, 2015;		callen. Rystalein
24 July		2JOI SMALA I	ocathon. Reajulein
0628	Underway from Westalets to Romaniag.	Task Unit, an	d Sumer Dam
0742	Anchored in brith 12, Rongelap,		
		The cos	corece barge <u>strengtone</u> was originally in-
50 July			to settle in tROSSECADS as a blace laneous
:201	Underway from Songelap so Bikini.	.:05:.	Enveryor: changes to place resulted in fea-
		spendin	is the entire test period at Rwajelein. As
31 July		such.	it was not exponent to redicertlyity from
1025	Anchored Detth 191, Bikins,		the is was entered by <u>into believes</u> likes 230
2. 5			wajaleja to Péari Herbór ch A September.
2 Augus' IRCI	Underway feat Silking no Seajalein.	4111.5	g on 21 September
	Shart-ay coas shering to seavagement		
<ol> <li>Assault</li> </ol>			USS LOWRY (DD 770)
1022	Anchored at berth X-10, Wegalein		
		Crew Size.	
d Aloguat			Arrival 25 July 1945
2700	Underway from Wajalein to Bikini.		Deperture: "C August 1946
			cation. Set Frank Sco
1 August 0830	manual to the the back make at		ocation - 15 mm (29 km) EM. Non Jocation - San Francisco
4034	Reprint to benth 362, (Skin)-		Cheeranie: 6 Maxember 1945
9 August			ince: 3g 4 January 1441
\$730	Chailermany Fricz Wilsing in Reajeleta		,
		late prot an	a Junction
August -		The det	stonyes l <u>oway</u> was a member of TC 1.1 (Sur-
1559	Meeted in perce A-11. Weejalein		atual), Atlached to Destroyer Stubiton 71.
			teer outfitted with special oceanigraphic
LC Muguus	Lade and Area Marketelle and Dilated		Glosogica, equipment to conduct occasion
2737	Enderway from Swajalein to Alkini.		<pre>//www.acd_cadiological_monitoring, is per- //www.acd_cadiological_monitoring, is per- //wwww.acd_cadiological_monitoring, is per- //www.acd_cadiological_monitoring, is per- //www.acd_cadiological_monitoring, is per- //www.acd_cadiological_monitoring, is per- //www.acd_cadiological_monitoring, is per-//www.acd_cadiological_monitoring, is per-//www.acd_cadiological_monitoring, is per-//www.acd_cadiological_monitoring, is per-//www.acd_cadiological_monitoring, is per-//wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww</pre>
11 Nogust			Homilioning duline both within and outside. Legenni
0742	mored to terris 168, Fikini.		Capor I.
		Shot Add 11	1(1y, 0900)
14 August			• • • • • • • • • • • • • • • • • • • •
0727	indepeny with passengers and dath for	11 Satisfalid	later during shot artic
	#Højašela.		
14. 1		PLUE GROOM (	(25 July, 1846)
15 August 1030	Source: at ReajeJuin.	24 July	
10.34	Actual at the process	1429	Generation and a statement of the second state
15 August			(roz Kwa)aleis Mic.l.
6720	Onderway from Keejstein in Uteani		
		25 JUDY	
17 August		: 72:	Anchored in Bikini Lagoon.
1201	Roured to Second 248, 2008513,	1535	Enderway for Alight radiciogacal monitor
1		NORE	LPG. Recharged to the second part of Billed Line
2) Kagust D945	Underways drydocking.	1905	Archorel in southern part of Rikini La-
040	Charlene devocents.		yoon.
24 NUQUES		20 2019	
0813	Free of Crydock.	0225	RadioLogical experis reported the pres
	-		where of radiation
25 August		0424	Anderway to solits encherages.
1100	Oralecway from Diking to Avalage(5,	1.00	Archered in nourbern part of Silited Car-
36.1		0.78.4	UD07. Childred and and and
75 Avgust	and house in south of 23 stands later	0954	Shiited anchotoges.
104)	Anchesed in Swill K 23. Swijalein.	27 July	
9 Sept report		.835	Underway from Billini to Kwajalwin.
1.20	Departed Kwajalein for Guam toland.		
		28 JULY	
16 September		7847	Anchored in Death & S. Meajalean Madil.
3748	Mooted as Case.	1745	Underway from Newjaleim to Diktol.

# USS\_LOWTY (00-770)

29 July		1416
1520	Kertwed as Sikont and anchoood in Siking England	1546
1) July	Teck on provisions treat USS Olwie (AD 1651	1200
1350	Anchered at Lectis 190 Youth.	۲۱ - ۲۵۲۶ ۵۹۶۵
2 Magest 1826	snělivel bezzhal těchníly enrihering in bertů image	0000
August 1001	Shifted to anchorage ING South.	0645 9.164
8 Regulat NGI7	Narrosed to berth 186.	C855 1400 1410
LD August		1716
1931	Charlenay with solpy in Destroyer Equation 7 for San Diego vie Poet) Marton elles a (Lring run on target ship LC2-500	1850 1845 1866
	I SM 60	12 July
Crem Stae.	19	1400
Film) A(cli	Areheak. 4 July 1945	1530
Crew Cozzilie:	n for Shol BAKEA - UES Albematie (AV 5)	1600
Shol 9AREA L	cation Kvajaletu pialton: Suržakritriu 1946: Bibton Atolt	1650
		14 July
	Danding ship 198-60 was a median of 10	16C0 1645
ill. March M	Laboratory Unitly, it was the ship from the bomb was active/libra for what HAKAM ITA	15 Daty
	an evacuated before BAGER and did mat	1140
Shal Jelf (1	leobl "flor	16 .2019 0545
30 June	Beared to assisting outly ${\cal G}$ at Mwajalein.	3410
7 July		0622
0672-0611	YW 94 alongside to delivers water.	0123
1152	fundrishing from budy to Cast Gabalan Hail (1951-55 for factoria with the jutanes of	0129 69,0 813
£720	VSS Munage (ATP-101) and two STRs. Commenced enseting Gunston Hall.	1255
1229	YTH 460 CALL OF	1224
5230 5230	Munger cust off. Monted in Cunston <u>Hail</u> .	1255
	Enteerd Guisson Hall.	130
1363	With Conside Hall Gide; way to alkami.	18 July 05:5
< July 0831	Entered Bikini Lagoon.	0%40 060%
6928	G <u>unaron Kali</u> Angogred in assigned berits.	0680
1000-1245	Clear of Gupsion Hall.	0710
6120	Anchosed in berth 38. Rikin).	0140
5 July 8365	ATR-124 alongside.	0825
1410	Guderway to shift to benth 54A.	0843
105	Moored to been in beith 54%.	1920
P465	ara 124 ordeniesy from starboard stde	1203
8 Joly 0165	ATA-180 addsed to obuits in changing	1209
0.01	beeches	1740
G124	Underway (com pesch 54% (o moor allongside - <u>Alberati</u> v	1010
0805	Monred alongside Albestarle.	

1515	ATE 120 allengelikk starboard wide to av
	vist to shift any moning
1546	Underway from alangsade Albemario en
1200	route to retto San Moased in Desch San
	Houses in sector sec
H Saly	
Q530	ATA 150 LARE ATOMICANO IN DANIAL IN
	shifting becch.
0550	underway from besth 540. to four peace
0055	mon:Sing in Derth 165 ATN-160 underweitigen alongeide.
0.04	Completed notifing to four modifing books
	in beith 164.
0855	Compared (see the underwater (s)).
1400	Conserved catsing underwater unit
1410	Unit clear of Mater.
1206	ATE-160 monied alloogsade out portaide to
1806	assist in swifting brooks. Underway from last point masting in burth
:800	tél.
1842	Report in Secto 544 Rikani.
1850	ATA-150 underway from alongside.
17 July	
1400	ATA 280 care asonyside portaide.
1444	Underway from beach 54% to beach 163.
1530	Cogenated matching,
1600	ATR-160 got underway from alongside.
1650	Completed Brailing is foot easiing bodys. In beth 351, Biking
	14 Germanyl, Biktor
ld July	
iáco -	Communication Converting incident eacher could a
1645	Underwater which as centred depth
N Daly	
1140	Commenced calaing delector bette
1285	Desecto: Dell clear of ester.
16 July	
0545	Createnned uncost inc.
0545 (#10	Cosmented annooting. ATA 180 (Junio Aliongeizde die Jassijet die
0545	ATA 280 (amo Alongside to assist to shifting bread
0545 3410 0622	ATA 280 (also Allongside to assjut to shifting bresh Underway fram pooring beaus
0545 0629 0123	ATA 180 (Alan Alongside to assjut in shtiting brash Underway from monting becys Monsed to Alformatic in becch 40.
0545 3410 0624 0123 3129	ATA 280 (Jimo Akongsizde to Jissipht in shifting brash Underway hope monting broys Housed to Alternatic in hereits 40. Ata 350 left from Algorithic.
0545 0673 0673 0123 0129 AP,0 1130	ATA 280 (Almo Alongsizde to assist in shifting brach Undermay transporting brows Housed to Albumarie in becch 40. Ata 250 left from Albumatic. Stalpowed ship in prescution for MARYS
0545 3410 0624 0123 3129	ATA 280 (Jimo Akongsizde to Jissipht in shifting brash Underway hope monting broys Housed to Alternatic in hereits 40. Ata 350 left from Algorithic.
0545 0673 0673 0123 0129 AP,0 1130	ATA 280 (Alan Alongside to assist in shifting brach Undermay from pooring broys Moused to Albertate in Actob 40. Ata 250 left from Albertation for MARY Stelpped chip in preparation for MARY AtA-180 alongside to assist in shifting betth.
0545 0410 0022 0123 0129 0120 0120 0120 0120 0120 0120 1205	ATA 280 (Line Alongside to assist to shifting brack Underway troe monting brows Maked to Alternatic in betch 40. ATA 50 left from Alconfilde. Stelpped ship in preparation for MAKYR ATA-185 alongside to assist in shifting betch. Underway icon alongside Alberarie. Magered to monting bady in Derin 24%.
0545 0623 0123 0129 0129 0129 0129 0129 0129 1295	ATA 180 (Alan Alongside to assist in shifting brach Undermay from pooring brows Macred to Albertaile in factors 40. ATA 150 info from Albertaine. Staipped this in preparation for MAAYS ATA-180 alongside to assist in shifting Setth. Undermay from alongside Albertaile.
0545 3610 0624 0123 3129 AP,0 1130 1255 1255 1255 1326	ATA 280 (Line Alongside to assist to shifting brack Underway trade monting brows Moured to Alternatic in becais 40. ATA 50 left from Alconfilde. Stelpped ship in preparation for MARYS ATA-185 alongside to assist in shifting betth. Underway trade alongside Albertarie. Moured to moving bady in Derth 242.
0545 3610 0624 0123 3129 0123 1125 1255 1255 1255 1255 1300	ATA 280 (Line Alongside in usight in shifting brack Undermay from scaling brows Housed to Albumaste in becels (D. Ata 350 left from Albumatic. Stelpped stip in preparation for HAGMS ATA-180 alongside to assist in shifting brith. Undermay from alongside Albumatic. Housed to moving bady in Derth 54A. ATA-180 got undermay.
0545 0623 0723 0123 0123 0123 0123 0123 0123 0235 024 0255 024 0255 0255	ATA 280 (Line Alongside to asspect to shifting brack Undermay from scoting brows Housed to Albumarie in beach 40. Ata 250 left from Albumatic. Stelpped ship in preparation for HAGYS ATA-180 alongside to assist in skifting beach. Undermay from alongside to assist in skifting beach. AtA-180 alongside sterboard.
0545 0623 0729 0729 0729 0729 1225 1225 1225 1225 1225 1226 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1240 1255 1250 1255 1250 1255 1250 1255 1250 1255 1255 1255 1255 1255 1255 1255 1255 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556 1556	ATA 280 (Line Akongsizde in usight in shifting brack Underway from monting broys Macred to Alternatic in betch KD. ATA 350 left from Alternatic. Stalpped thip in preparation for MAKWR ATA-180 alongside to assist in shifting betch. Underway from alongside Alternatic. Appred to monting bady in Derth 34A. ATA-180 alongside starbuard. Underway from betch 34A.
0545 0625 0123 0123 0129 0123 0129 0125 1255 1255 1255 1255 1255 1255 1255 1255 1255 0575 0575 0575 0575	ATA 180 (Line Akongsizde in usight in shifting brack Undermay from monting brows Macred to Alternatic in betch 40. Ata 150 left from Algonatic. Stelpped ship in preparation for MAGPS ATA-180 alongside to assist in shifting beith. Undermay from blangside Albonaric. Appred to monting beay in Derin 144. ATA-180 alongside starboard. Undermay from betch 544. Macres to Albonarie in berth 40.
0545 0623 0123 0123 0129 0295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1295 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205 1205	ATA 280 (Line Akongside in usight in shifting brack Undermay from monting brows Macred to Alternatic in betch 40. Ata 350 left from Altergaturie. Stelpped ship in preparation for WARMS ATA-180 alongside to assist in shifting betch. Undermay from blangside Alternatic SAA. ATA-180 alongside storboard. Undermay from betch 544. ATA-180 alongside storboard. Undermay from betch 544. ATA-180 alongside storboard. Undermay from betch 544. Ata 480 got undermay.
0545 3410 0625 0123 3129 43,0 h130 1255 1324 1355 1325 1326 1355 1340 0515 0540 0605 0600	ATA 180 (Line Akongsizde in usight in shifting brack Undermay from monting brows Macred to Alternatic in betch 40. Ata 150 left from Algonatic. Stelpped ship in preparation for MAGPS ATA-180 alongside to assist in shifting beith. Undermay from blangside Albonaric. Appred to monting beay in Derin 144. ATA-180 alongside starboard. Undermay from betch 544. Macres to Albonarie in berth 40.
0545 3610 0625 0123 0129 0123 0129 1255 1255 1255 1340 0515 0540 0540 0540 0540 0540 0540	ATA 180 (Line Akongside in usight in shifting brack Undermay from monting brows Macred to Alternation hores 40. ATA 180 left from Alconfilm. Stalpped thip in preparation for MAKPR ATA-180 alongside to assist in shifting brit. Undermay from blangside Alberarie. Append to monting bady in Derin 144. ATA-180 alongside starboard. Undermay from better 544. ATA-180 alongside starboard. Undermay from better 544. ATA-180 alongside starboard. Undermay from better 544. ATA-180 alongside starboard side. Undermay from better 544. ATA-180 alongside starboard side.
0545 0624 0729 0123 0129 0123 0129 1225 1225 1225 1225 1225 1230 0515 0540 0515 0540 0515 0540 0515 0540 0710 0710 0740	ATA 180 (Line Akongside in usight in shifting brack Undermay from monting brows Macred to Alternation hor brack ATA 180 left from Algorithm. Stelpped thip in preparation for MAKPR ATA-180 alongside to assist in shifting brit. Undermay from blangside Alberarie. Appred to monting bady in Derin 144. ATA-180 alongside starboard. Undermay from better 544. ATA-180 alongside starboard side. Undermay from better 544. ATA-180 alongside starboard side. Undermay from alongside starboard side. Undermay from an alongside starboard side.
0545 0625 0123 0129 0123 0129 0123 0129 0125 1225 1225 1225 1230 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575	ATA 280 (Line Akongside in usight in shifting brack Underway from monting brows Macred to Alternatic in betch 40. Ata 350 left from Algonation for WAAVS ATA-180 alongside to assist in shifting beich. Underway from blangside Albowarie. Moored to monting bray in berth 34A. ATA-180 alongside starboard. Underway from beern 34A. Maarys from beern 34A. Moores to Albowarie in berth 40. ATA 180 alongside starboard side. Underway from beern 34A. ATA 180 alongside starboard side. Underway from beern 34A. ATA 180 alongside starboard side. Underway from algongside Albowarie on toure to assigned monting butys with assistance of ATA 180.
0545 3410 0675 0123 3129 45,0 h130 1255 1324 1355 1325 1326 1355 1340 0515 0545 0640 0710 0710 0710 0710 0740 0645 0645	ATA 280 (Line Akongsizde in usight in shifting brack Underway from monting brows Macred to Alternatic in botch 40. Ata 350 left from Altergalide. Stelpart ship in preparation for WARPS ATA-180 alongside to assist in shifting beich. Underway from blangside Alternatic. Ata-180 alongside starboard. Underway from beich 544. ATA-180 alongside starboard. Underway from beich 544. Ata-180 got underway. ATA-180 alongside starboard side. Underway from beich 544. Ata-180 alongside starboard side. Underway from beich alongside alongside and botch 50. Ata-180 alongside starboard side. Underway from the starboard side. Underway from alongside starboard side. Underway from along AtA-180 out underway from alongside.
0545 0625 0123 0129 0123 0129 0123 0129 0125 1225 1225 1225 1230 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575 0575	ATA 280 (Line Akongside in usight in shifting brack Underway from scoting brows Housed to Alternatic in botch 40. Ata 350 left from Altergalite. Steipped ship in preparation for WANYR ATA-180 alongside to assist it shifting betch. Underway from blangside Alternatic. Ata-180 alongside starboard. Underway from betch 50%. Ata-180 got underway. Ata-180 alongside starboard. Underway from betch 50%. Muotes to Alternaty and botch 40. Ata-180 got orderway. Ata-180 alongside starboard side. Underway from betch alter. Underway from the starboard side. Underway from algogidy Alternatic on tours to assigned storing burys with assistance of Ata 180. Dame you underway from alongside. Completed booting to four monifed befor
0545 0625 0725 0726 0726 0725 1225 1225 1225 1225 1225 1226 0515 0540 0515 0540 0545 0540 0710 0710 0740 0740 0740 0740 0740	<ul> <li>ATA 280 (Line Akongside in usight to shifting brack Underway trave scotting brack Ata 350 left from Algosphile.</li> <li>Stalpped schladmarte in betch 40.</li> <li>ATA 350 left from Algosphile.</li> <li>Stalpped schladmarte in preparation for MAXWE ATA-180 alongside to assist in shifting beith.</li> <li>Underway trave alongside statboard.</li> <li>Underway from betch 54%.</li> <li>ATA-180 alongside statboard side.</li> <li>Underway from betch 54%.</li> <li>ATA 280 got underway.</li> <li>ATA 180 alongside statboard side.</li> <li>Underway from alongside statboard side.</li> </ul>
0545 3410 0675 0123 3129 45,0 h130 1255 1324 1355 1325 1326 1355 1340 0515 0545 0640 0710 0710 0710 0710 0740 0645 0645	<ul> <li>ATA 180 (Line Akongside in usight in shifting brack.</li> <li>Undermany from monting brows.</li> <li>Marrany from monting brows.</li> <li>Marrany from monting brows.</li> <li>Marrany from monting brows.</li> <li>ATA 180 left from Algomation for MARPS.</li> <li>ATA 180 alongside to assist in shifting brit.</li> <li>Undermay from brows.</li> <li>ATA 180 alongside starboard.</li> <li>Undermay from brows.</li> <li>ATA 180 alongside starboard side.</li> <li>Undermay from brows.</li> <li>ATA 180 alongside starboard side.</li> <li>Undermay from Starboard side.</li> <li>Undermay from the solution borys with assistance of ATA 180.</li> <li>Rome to assigned monting barys with assistance of ATA 180.</li> <li>Completed booting to four monting borys in berth 161.</li> <li>Ony officer and brows entitied cent coord.</li> </ul>
0545 0625 0725 0726 0726 0725 1225 1225 1225 1225 1225 1226 0515 0540 0515 0540 0545 0540 0710 0710 0740 0740 0740 0740 0740	<ul> <li>ATA 180 (Line Akongside is usight to shifting brack Undermany from moniting brack Ata 150 left from Algorithm.</li> <li>Stelpped ship in preparation for MASPS ATA-180 alongside to assist in shifting brit. Undermay from blangside is assist in shifting brit. Undermay from blangside statboard.</li> <li>ATA-180 alongside statboard side.</li> </ul>
0545 0625 0123 0123 0129 0123 0129 1225 1225 1225 1225 1225 1230 1255 1230 1255 0560 0515 0540 0515 0540 0515 0540 0710 0710 0740 0710 0740 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0710 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 070 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0700 0	<ul> <li>ATA 180 (Line Akongside in usight in shifting brack.</li> <li>Undermany from monting brows.</li> <li>Marrany from monting brows.</li> <li>Marrany from monting brows.</li> <li>Marrany from monting brows.</li> <li>ATA 180 left from Algomation for MARPS.</li> <li>ATA 180 alongside to assist in shifting brit.</li> <li>Undermay from brows.</li> <li>ATA 180 alongside starboard.</li> <li>Undermay from brows.</li> <li>ATA 180 alongside starboard side.</li> <li>Undermay from brows.</li> <li>ATA 180 alongside starboard side.</li> <li>Undermay from Starboard side.</li> <li>Undermay from the solution borys with assistance of ATA 180.</li> <li>Rome to assigned monting barys with assistance of ATA 180.</li> <li>Completed booting to four monting borys in berth 161.</li> <li>Ony officer and brows entitied cent coord.</li> </ul>

1910 Two officers and twenty one estimated mean evacuated to Albemarie: one officer and largy collisies neo (constant on logic)

### LSM-60

2 July 1011

1042

## <u>USS LST-125</u>

49 2019 (445	Different and onew securited apparts, re- sumed normal operations.	49a.	Refeatived ship, Restored to normal oper ation: In South 199, Ship telesyded alget orders (rog 250)	
1565	Commented raising detector chamber. Detector chamber clear of water.	3-24 Auty	1944 ab and 1977 52	
26-Jaly 1967 – Godernan (kom anvin iti ku berti teta.		Shot EAK:R (."V July, CBIV)		
0843 24 5aty	Underway (som desin (Al to berth Sky. Moored in Derth Sky.	24 JULY 2990	čieme modo poteni čis <u>Koribug13</u> .	
0025 0549	ATA (89 serve alongs)de. Underway to shift betki with assistance - of ATA (60.	28 JUNY	SSM Gelone twoding 4.5 8/24 cours team 20 tea: 19.1 meters).	
364% 9585 0185 0136 4619	Reared to <u>Alpern</u> ele in Berth 40. ATM 190 underway from slongside. ATM 191 alongside stantowed wile Underway from Alpenystic to assigned woor ing bacy Commerced movering	6 hugant 1000	Gebgen seadangs: main deck average 7 8/24 house, maximum (7 8/24 Yours: first piate tone average 2.5 R/24 hours, eavisur 3 R/24 hours.	
0455 041N	ATR-JBC underway from alongston. Completed mooring to four poorbing budys - In Deck 10:	.a Avgust	isspected by 25M and ship a representation (web)	
:236	Svenisted the officer and twelve endisted wen to Albezarie.	\$7 Angust	State inspections complete: ship made available for towing.	
1630 1614 1914	Comparison Lowering densities built. Extension built toward to destruct depth The officers and twenty-three emitsed were executed to Accomparisons, perpendicu- for BACH.	19 august 6000	Siew shifted from Rockwall in 45% Similar GD-141.	
25 Joly		21 August	Average conside Getger reading 1.9 B/24 Noues:	
(60+	Final evacuation party Left the ship with all protocome incounted for their com- pletely abandoned.	76 August	Trend to Knegaty(r by MCG $\underline{c}(\text{amp})$ (ARS 23).	
5 1.1y		A 25 August letter on the condition of (ST-*y on decom- missioning stared that it was very tackpartive and therefore did not allow long periods of inspection. It user charts that for the user way in path coddition.		
0835	LSM 50 Has completely destablyed by shot BARER.	27 Augusa	Archoived as RM2)alets, heres A-20.	
Its crew was dispersed to vasious uplies of the task formet		28 Muquat	Sectime Evaluated.	
14-14-1		29 September	Rvetege Lapside Gelger teading 1.24 R/24 - Noues.	
	2 <u>5-12 22</u>			
Bacha' Atabi Crew Cockiller Crew Lockiller Stor Agif Cec Stor Agif Cec Stor Agif Cec Stor Agif The Case Unit and Cot 123 dusting 1 asted Def	Arrival Belore II Sune 1948 Departure: 26 August 1945 Fox Shat ABIS <u>USS Porteval's (APA 200)</u> For Shot BACIK, Fortwal's (APA 200) For Shot BACIK, Fortwal's Atton: 1.590 yerds (Eara 4 AB, near Awajale'r Atol Foxcalae a cath Landfog chip, mas a feiget eeserl Specation CROSSROADS Dis crew was evalu- are APLE and off not servico. It served in 5 9 of the L2.5 meanding death unit!	Bikins Aldi Stew Toracter Shut Bole Los Shut Bole Los Shut Bakka Ko Sunk 14 Augus Tatk Loit ard Tata-120, Gut Neg UMKOR at	JSS LST-171 (400); 2 dt Biblin For Besti Arrival. 10 JJ'y 1985 Fer Sher RAKER: <u>INSS Rockyall</u> (APA-770) 6(15): So foote Have Subik Bay to Ruagatelin tellor. 3 rml (5 km) 45, practica on Biblint (5 km) 1 1965 AL sea near Biblink (Function a same Landing stilp, Mas a target vessel (Atopicskickint, iso preve way evaluated for 12 5 (Danding Stilp, Mas a target vessel (Atopicskickint, iso preve way evaluated for 12 5 (Danding Stilp, Mas a target vessel (Atopicskickint, iso preve way evaluated for 12 5 (Danding Stilp, Mas a target vessel 12 5 (Danding State Chirt).	
90 (an e 090€	Evenues ed ship: tree aboard Sockes)	Shel 48:5 il	July, 39001	

New present for AULE. We reside from Subbridge For bactors Abolis

B July (435 Anchored in beach 63, Wikimi Kagowa,

Boaching cram reported on board (Refet ence 6, p. 1-26 Jr., 1<u>738 2</u>1305 (AN-795) reported <u>1257-52</u> (Adapt Sweet).

### USS\_LST-125

16 July	Smithed to beech 53, blaini Lagoon.
¥1∿1 €1	Beached on Bikint Island, berth 16. All personnel except for commanding officer and one wan were transferred to USS Chil con (APA-38: for seruin to the United States nefere test BARER.

14 27 July - Dne-maa secontry watch enound wach night.

Shot BANIA (25 July, 0875)

- 25 July All perparted departed LST-121 for Rockwell.
- 31 July Army requested that ramp be inserted to recover year. Ship reported to be cadio baginably obeac.
- I August SEPS 1915 Commandity; affloes bearded ship for Supportion Frequestion completely Elected.
- 2 August Engline rock purped ovi .
- 10 August USB Muname (AT) 2015 and USB Menatchee (ATF-128) removed ship treas brach.
- 12 August Stati Snapections complete.
- 14 Register 1435 Stated in cost 1913 unit southwest of Alkins and Such by gustante.

#### <u>uss (s?</u>-130

(rew Size 28 Dhahri Atolik Areival, 25 April 1946 Antink Analik Departure, 29 Acquit 1946 Crew Location for Shoi AELE: USS Accuedit (APA.200) AELE: USS ACCUED FOR ACUED FOR AC

- Task Both and Function St<u>[1]</u>. A task landjing shop, was a Factor Vecsel Guring CROSSMONIS Its offer was evaduated for each whot. It served to LST Group 9 of To 1.2 b Gland and and and chair.
- 5561 #8:5 14 July, D9603

Superbalantly after attiving in the area, LST-13 was benched on Aiking (stand, its come was evacuated to Rockeys); on 25 June.

, July 3002 Tear animals were reacyed from sugarde. 3010 Decision from of indicactive contamina atom (Retervence 5, p. 2–17).

- 7 July 5710 fears A and B rotuined to 651 193 to put it tack in operating condition. As in agention of the ship proved on damage. 3 July
  - 0518 Another ad in North 18.
  - 0474 Shifted to beeth 44
    - 1045 Team C and remainder of scow resurced.

- 3-24 July Come aboat 0 157-133-
- Shot BARER (25 July, OB151
- 2) July 1930 — Crew evacuated to <u>Boolog</u>().
- 23 July (24 separated a Golgen coading of 1.5 8/24 hours measured allow expects.
- 28 July ReM reported a Gobger stading of 0.25 2724 hours at 250 last (16 Actes).

B August: 1020 INT-10 reported main dect assessive 2.5 R/24 bacts, baside affectsuperstructure reading, 2.5 R/24 bours, and deck first platfore 1.5 R/24 bours, and tank deck eft 0.3 R to 1.0 R/24 bours.

- 13 August Blast damage to the whip reported.
- 19 August Properties approximately 40 cars of writer apparently no least in sale.
- 20 August Pumped out 90 tens of ware: troe bilges. control room, engine cross, and tank deck: apparently up deaks.
- Request Pumped cut approximately 15 tons of wate: from main engine tube.
- 23 August Scall Suspection templeted and mode available to CDL 1.2 for disposition. Average topside reading 0.9 M/24 hours.
- 28 August Executissionvá.
- 29 August Departed Bikish for Wegistein in tow by USS Achonawi (ATF-148).
- 30 August Arrived at Rwajaleia.

### USS (51-220

Crew Shze: 54 Bikint Atoll Errowal: I April 1946/17 June 1946 Bikink Atoll Creature - 28 Kugust 1946 Crew Localisch der Shor Able - <u>USS Recewall</u> (APA-2001 Grey Localisch der Shor Bertier - Rockwall Shot ABLE Localisch - 3.277 yerds (3 kml M Shot BAKER eoralisch - 3.466 yards (3 2 km) M Cecommunitotes: 28 August 1946 Suck ID May 1948 geer Kwajalein (8044-M, 1610251)

(as) Coll and Function Tack Sacaling ship (625\_007 000 were a sender of THE \$.2.5 (Facility Craft Colt), 187 Group 9, 11 was a Facger vessel for shore ABLE and HAMER involved in Kerny actionate expectivents with poisse genes and composition.

3561 AGLE 11 July, 09001

L July 1756 <u>USS Stian's (AP 'N) boarding tout decided</u> nor th 564-0 since is wet still swiking forw end all.

2 JULY 8660

P938 EtJah reported the boarding team aboard.

### <u>USS\_LST-220</u> 2 July

USS LST-545

- Declared radiobogically safe by stillas Conference 6, yg: 2 C.A.IP (tersign 2 ) 1000 A-: 41 1024 Team & bearded. Chip lound sale for
- Sear ding : 1105 Team IL Southers.
- 4 Daty 1008 Them C thooseded. Sail knew new aboard.
- Crew aboard 207 270. 5 23 3614

on a buly, the damage report indicated that there had been no structural damage AL. Jamage was due to two stall lites (Reference 1).

M July Proximited of the to Booken; (

5958 BARLR (25 30)5. 08351

24 July

1282	Bearded by the Infrida boarding reases
	J:cm USS Callent (ARG 221)
1305	Current bearding team departed
1952	Reparted Gelger sour (cottaring).
	averaging 3.0 BATE Nouse Conference 5.
	p. 6 b 24F.

- Searced by team from ship is need for 11 Meaust inspection
- (4 Rogacy Inspected by DNR and chip's proceeded tives.
- staff bracetulons constead. 1 August
- Z. August. Average topsEde treading 0.27 x724 black.
- Towed from Rivini to Kwsjalein. Ship de 28 Norrass contraction and the second s

the 220 showed no evidence at physical datage from upon EAREN ARelevence 71.

#### LSS 121-388

Crew S128: - 80-Statol Alphi Archest 14 April 1946 Bhainh Aloll Degarture: 25 August 1946 Shol A8.5 Location: 28 mm (52 Am) Wi Shot BAKEN Lorathon 12 em (41 bm) . beconterination cotathen. San Franchico Secondarination (bracter) - San Francisco Sperallonal (learance - 5 Encember 1945 Intal Elearance - 13 Opcamber 1945

- fash Unit and Cunction Sank Lunding Ship 135-388 was a somber of Tr. 1 B.I Geepaar and Service Smith, Part of (15 Support function way as a secreation shop.

Shor 4818 (7 203y) 6900)

30 J. Jone

1530 Underway to area Packard

t aver 1926 Ansered Hikini Lagues and apphased to berth Job.

Anchored in pesth 4).

2 July 184J

3 (fally 1943	Beached in the 197 beaching accalon Pistri
SHOT BEALS :	35 Jely, 2936)
24 July	
1492	Onderway.
25 J. Ly	Anemalog with seaters of 070 1.8.
() <u>\$4</u> 4	Superior for Kongelap.
1802	Anchared at Polyclap.
13-2-14	
1555	Jacerwy to Bikini
Al Daty	
9425	Reactaired #iking Lagoon and exclused in
	the vicinity of bench 61.
0545 1700	seached on Kiking Inland
: 705	Nothered in the vicinity of beach 44.
2 August	
1.167	Anchored in the variably of besch Pages.
25 Maguest	

25 Magust Left Right for Sections.

#### USS 151-545

Crew Stre. 41

Bibenni Reoki Arrisari - 3 June 946 Bibenni Reoki Arrisari - 3 Lune 946 Bibenni Reoki Desarturer - 28 Requet 1946 Crew Josefikan Par Shat Aste - <u>28 Pocketi -</u> JAPA 220; Crew Josefikan Par Shat Aste - Rocked?"

- Shot AB.I I courser I CB7 pards (S.7 km) H Shot AACIR Localiser I,142 yurds (S.8 km) r
- Sure 12 May 1948 rear Ewejalein (8048 W. 15/071181

Dave detti and Lunction. [SW-545] a tank leading ship, was a sember of TU [12.5] (Landlog Graft Solid), LST Group 9. In addition to scruting as a target ship. The Army dede upper Dath and the Producering Only used the ship In special their experiments, Junualities and heavy equipment were placed about the ship for expeti-THE ARE LOT

Shit AR 5 41 July, 09001

: July

- i 187 bounded by COS Eliants (AM /4) that(a) Boarding Teas 1.
  - 1.20 htild reported the boarding team way ananrd.
- Reported Genger Devol by Etlah (Reference 6. pp. 7 1 8 9. 7 1 17 A. 7 1 18 Al. 1749
- ytut s Di Ai
  - team & renoweded.

1:14 Team is and case of more pebbaging

There was no damage to the ship as a result of the sest (Reference 1)

SMAL BAREP (25 July, GODA)

28 2019

- <u>255 Poilo</u>tmos (ARC-42) possed close abraid and saw no apparent dawaye (Rud inaa ernace 6. p. 7-1 29 61.
- Boarded by the initial boarding reas 1 DOC (Reference 5, p. 6-3-291.

### USS LST-545

### 28 July

- 1256 USB\_Current (ARS-72: reported the magaand team aboard (Weincence b) p. 7-2 M-3[)
- 1952 Reported Seiger sour, average reading 2-0 R/24 Houts (Reference 5, p. 6 0-34).
- Singust 6 ABBG CRT-10 separated average standers reading 0.7 R/24 hours. Inside superstructure 0.35 R/24 hours, and Lank deck 0.75 R/24 hours.
- (0 Lynns)
- C244 1041 058 Enspection ream aboard.
- 12 August Inspectients complete Made available to CTG 1 2 for towing.
- 21 August Average inpiside conting 0.096 R/24 Projet
- 27 August Decomissioned.
- 28 August Departed Richall for Keylstein
- 30 Aurousi. Anchored in Reajuinin.

#### 1155 N ST-661

- trev 5126. 52
- Bikhal Aloli Aralval, | June 4946
- BILART Alott Detarture: 25 August 1545
- Grew totalise for Smot ABLE. USS Receivall (ASR 230) Grew totalion for Smot BATLK: Rockwall

- Shet ABLE tocation. 7,020 yards (2.1 km) MME Snut SAKFA tocation. 7,655 yards (2.4 km) M Such 25 July 1946 near kwajnietn (8051.41%, 161020 3161
- Task Unit and Function LST-661. • teak lending ship, was a reader of TU J.2.5 (Landing Craft Unit), Ist Group 9, its main function was as a target ship, and it perforced various experiments in that role for the Army Ordnaukie and Explorering childs. Polson pases and appendiction were stored on hi for shors AHLE and RAKER .
- Shot ABLE IT JULY, GREBS

i Jojy

- <11×11× The Salvage Unit reported tighting tires aboard EST-60s and orheas (Reference t. p. 5-8 315.
- 1540 USS Kiloh IAN (4) reported the pyrotech ates on 197-001 were exploding because of the fire on tward (Beternore 6, p 1-1 6-121.
- 1531 124 directed all abopt to stay at least t.100 yeards (s ke) away from LST 661 because of the heraid from the fire and exploring Army amountition (Heference 5. p. 6 B 12).
- 1565 Reparced Galge: you: by the 05M
- 1702 Allah superced that the UST-661 fice was below deck (Seference 6, pp. 7 t All? and 1 1-8 101.
- 2026 Frees were write acrive. In was write dangerous to approach due to the possibility of explorators

2 July 0852

Etian reported a boarding teap absend.

### USS 1ST-817

Reported Gelger same; by <u>httep</u>'s team (Retainence 6, pp. 4-2-A 24 and /-C A-24). 6931 1610 Samplderlog fire on tenk deck extin gut shed.

2025 **Évez** in securned to ship.

5 July

ius. twenty-seven officers and enlisted ann returned to UST ON (ree Rockey)).

Shot BARDA (25 July, 0605)

26 July

0836 Officers and men evacuated to Rockwall.

83 **Augu**st 0830-0035

- Communicatives officer with Bureau of Ships representative and radiate team boarded for Inspection.
- 6986 Eleven officers and enlisted per boarded ship for trapection.
- 0928 responding officer returned abased.
- 0930 importion marty left ship.
- 0911 Commanding officer left ship and returned to Reclysti with Incourtion party.
- 25 Negast Underway to Kwajelsin.
- 27 August Anchored in Kestelmin Mooil.
  - C930 BUE SOR DOARDED TO EVENUE ADDRESSENTED.

28 hogust

0001 Shite de comitse innel.

#### USS LST-017

Crew Slag 67 Stalot Ainti Arriva). 19 March 1944 Shohn Aldii Gergiriurer 29 Asguil 1946 Shoh Abit Locathen: 38 mai 1947 At ann At Sho: 845[R Locathen: 24 mai 144 km] t Decontaminustion Location Solvirancisco Operational Clearance 21 No-omber 1946 Finc' Clearance 22 November 1946

Fash Unit and Function Tank landing ship 1.97-811 was a combe: of TV 4.7 1 (Transport Unit) as part of transport Division Diin and UST-881 were toaded at Pear's Karbor with construction deterials. Once the ship arrived at Pear's Narbor, 11 served as a harracks and storage ship for the Seables (Reference ), p. 6 A 20).

10060 (Stol 11 July, 1900)

- JO JUNE 1615 receives with the Life for area mailwoh
- t Daly 1915 According perch 39, bikton
- ) July 1248 beached on Faking Island. 5 July Ġ:33 Anchored in beach 39. 1901 Brached at LST landing on Bikini.
- 11 July Anthored in beach 39, Bikini,

## USS 1\$T-81/

)5 Jahy 0009 1005	750k om tresbestet froe V(§ V]jdoat (Au 25)		('eanarie: B Cecenber 1946) rre: 13 Decembri 1986
1332	Accelerated in Texastre 16.	7356 (r 11 ún) 757 86	s <sup>s</sup> usstiur. , a came landlog ship, served ic TV L.A.i.
16 July 1915 17 July	Bearings at Biking	(Wepair office	and Securic Colt). It setted as a post In addition. In provided provisions or support to other support ships in the
2410	Anchored in the vicinity of herith 24.	S-42 #3([ ()	
19 Julγ 2013	Anchared (a Bikini Lagoan.	10 June	
SPC: 844(R (2	5 July, 0875;	1575	Tepart field 2016 (coll -
24 July		L CETA	Conderway to Kwajalebo itow Bikini ar Liwe of shet ABLE.
:5:6	Underway with Division 4 of 70 1.3 for	1608	Shathated in KMEJalvin 2003).
25 (16) T		2 July Çeroj	Underway in Daida).
0695	Diserved BANEN explosion. Archoied in Kongelap Atali.	4 July 0140	Anchored in Serit 54, Dikini,
20 DC1Y			
1734	id.decady to alkerd.	2-03 BACIN [3	25 201y, 3935;
אולכ 11לכ	And/Gred in Decch 09 Biking.	24 001y 1657	Departed Bikini on solide to Keejalein.
1714 1714	Beauted at Biking 16,578.	2) -10)y 1550	Actived at Reajatein.
tangun 90 1681	Anchored in Bikint Lagoon.	23 Guly 1852	Underway for Bikini.
1. Abgunt 0942 24 Avgunt	Anchored at perch 30.	28 Doly 1247 126	Anchosed br. Bikin: Legoon. Anrhuidd 1.010 yardt (914 wylers: South of Setti 150.
15ac	Beached to Biking Island.	3C July	
35 алдын ]4()	Soderway for Kesjelein after tailor on	1265	Anthoped in becty M4. Simily
16 August	potable Maser ficr <u>Wa</u> ld <u>ont</u> .	): Ju¦¥·23 №	sgust - Vertodinatby stafted terthy and anthot: ages
1745	Anchored in Manjalein Lagoon.	24 August	
20 August 2704	Underway to address.	1852 29 August	Left Sikits Lagoon (c) Kwajalein
21 August 1627	Anchored as besch 64. Bikini.	1915	Anchared ar Kwajalein.
23 August 1426	Underway for Kwajelein	2 September 1451	Repaired Xwajalots ex couse to Pearl Hachory
24 August 1528	Anchored at Sectore.		JS <u>S,</u> UST ( <u>B</u> 2)"
31 August 1724	Underwery La United States via Pesti Asr Basi	<ul> <li>Friklah Depart</li> <li>Shut Abit Lou</li> </ul>	18- "6 June 1946 1844 - 25 July 1946 1819an: Bonye 19 Atol:
_	( <u>48-</u> 12 <u>; 7</u> 2⊔	Occortaninat:	station: 72 mml (4) km; E an Aocacion: Sen Francisko re. 72 November 1946
Binani Depart Shol BBLE Loc Shol BAKEP Lo	0 1. 2 April 1946 Gra 28 August 1946 Gitor: 2150 Ani 1218 Ami 50 Gator: 2188 Ami 1348 Ami 51 Gator: 2188 Ami 1348 Ami 51 Gator: 240 Francisco	6.0.1 I	, a time (Abling phip) was a member of 70 Rengerik Evacuation Urbri. To was one of ps used to evacuate the Najonal(mor from

#### <u>USS LST-871</u>

#### <u>USS\_LST-989</u>

4 .s.cly Smith ABr F ji Duly, 89001 Ď665 Moored to USS Spint Croix (APA-291) in Den (\*) 92 -) Juiv Moored off Receivis Inished at the time Aschored in berth 57. of shot ABLE as part of the Hongerte 1149 Evacuation Group shalled to apphreage north of Adrawan ₿ July island. July ib0+ Codeway to Bivint 9 23 July Annhoused as before. 5 July 0922 Anthornet ju beeth SR. Bittal. SMOD BARFR (25 July, B835) 6-24 July Anchered as before. 24 July 1501 5404 BATER [75 July, 6835) Underway Eo: operations area Barnon with Division 4. 30 1.3. 24 July 1152 Understay, departing Rikini Laguer. 75 July Anchosed in beach 29. Poogebup Anoll. 2740 25 July Doswaved shot BAMER 22 met (41 km) east of Hikini Lagoon as unit guide for a 30 July 1745 Underway Jon Alkial. 12-chip colored. 26 July acclued lowatainin. 31 July 9726 Anchered as Bikini. 27 July Departed Knagalete for Cae Alost-2831 Reached at Rakini 457 Seaching area. 28 20 ly And we the Atoli. i An-yest 1738 Rected to a portion couseway. 29 Buly 9625 Departed ine Atol: with 97 natives en-4 August route to Mothe Pioli. 1940 Anchored in the southwest end of Envir 1442 Beached at Mosho Atols. Island. 1616 Underway on coole to Pongelup. 22 August 10 Jelly | 1213 Departed Bikini Lagoon for Enryetak. 1204 Abothe (set all scoger) ap-1555 Cleared Bongelep Nector en route to Kwa-2) August Anchored as Envertak. Valeto. 1052 31 July Anthored AL Kesjalein 25 August

Since Lt did cot entre: Bikini Legoet sittet BAREH, it was not contaminated. It departed itom Karjaicha Cot Sea Francisca on 9 August 1945.

#### <u>186-121 220</u>

Crew Size: 2) Bitink Atoli Arrival. 14 March 1946 Bitink Atoli Opparture. 22 August 1946 Sho: Ait Location. 30 cml 120 km/ (At Speraturination Location. San Francisco Cperational Clearance: 43 December 1946 (Inal Clearance: 23 December 1946)

Lask U=11 and function LSC RBL. a task landing ship, was a maximum of full 3.3.1 (Transport Unit). It and <u>VICL UST RET</u> were tooded with construction materials and Seablers as Pearl Harbor. At BLAINL, both ships served as bacracks and storage ships for Seablers (Wetermore 5. p. 6.8.200).

- Small #5(1 41 July, 0900)
- 70 Josef

1335 Underway for operating area Narmon.

- t July 0900
  - 0900 Observed shot ABLE. 1823 Anchored in Serith 41 afser concribing Diking Leggers.

U<u>ŞS LST 989</u> Craw Sign. 84 Bikani Algid Alijval bi June 1946

Departed Environal of finite to Restalein.

Anchored in Derth & 20. Swejejeju

Separted Swyjabeth Los Leach Markon.

Blunni Algià Arrivali di June 1946 Rikini Algid Geparture: 25 July 1946 Shot ABU Location - Rongerik Atoli Shot Bakik Location - 22 mil (41 km) M Deconiadimition Location - Sac Engelico Operational Clearance: 19 Mouember 1946 Final Clearance: 22 Mouember 1946

List Unit and Function [.27-980, a rank Landing ship, was a member of tell [.8.7 (Rengerik Avaruation Inst), buttog give Neuß all Rengerik natives white obtaid SST V89 as a precautionary measury in the event the islands became rooraminated as a result of the CR0SS90425 tests.

Shot AB(1 (3 July, 0900)

10 June

1249

โอรา

27 August

3i August

[470 A]I Rongerik matives embarked or 1<u>37 989</u> (Reletence 5, p. 5-8-21.

## <u>USS\_LST-989</u>

1 July 3067	Property at Ringesik Atoli. LUTF 1 directed ofs 1.8.7 to disembary natives from 137-989 as eventually was not seguired theference 5, p. 6 2085.	1 August 1016	AttA 192 was directed to wash down playtant theoryging wath Atghegreeners lawer. (Ref prence 6. p. 2-1-2-51). AttA-192 computed washing down Mayrant
4 444	Hetuined in Ultimit.		(Petersence 6, p. 7 5 & 47).
-	Trensferced Almonals from Facyel ship (22) Saratoga (CV 2) to other target ships.	3 Мықтақ	ATA-19: was again directed to wash down <u>Regran</u> t mathe 553,-prevente streams sket eresce 5. p. 7.1-8 771. Afrei completing
STOT SAFLE 17	1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217, 1217,		The washdown. Geiger credings were to be taken at 30 feet (15 meters) from each stic (Reference 6, p. 7-F-B-74).
1000 97 20 2019	Anchored at Kwa(alebo.	2412 1623	Massawi down by ATA 192 (Reference 6, pp. 1 J-8 29 and 1 1-9 80)
28 2019 2510	Grand May 121 Contractions.	7 Avgust	Maggani crew transforred to \$62_Rork hridge (kek-228) <u>Maggant</u> wat boarded by working parties screpenied by a radiate
10 2014 :7)7	Anchored at Enventas Atosis		nonivor to nest for radioartivity. Atter being (ound safe for rebearding for list- ited periods of name, the working party
1) 303y 1950	All Engeneral satives were embarised on LST-969 (Seference 5, p. 6 ); 64:		The particle at 192 to senior in spray- les Bayrant with decontamination solu- tion. The commanding officer and a percy of the boarded <u>Reyrant</u> in the monitor.
/ λωςακτ 1364 9 λωςκεί	Underway 121 Majsherik.		In the Afternath, the commanding officer monitor, and two men bearded for 10 min- utes. Tapado readings 0.7 to 0.0 k/s4 Nagas.
1653 1458	Anchorne at Kwajainte Aroll. Underway fus swart Morbor.	/ 12 August	Work parties outtined to board <u>Mayran</u> i to compute pairing operations, and to
	ų did mot enter Bitini Lagoon atter cest mot radiokogicalių roktaminated. US <u>S</u> MyrRymT (CO-407)	A August 1945-1199	Topolde average A.E. R/24 Cours: Selow
Crew (orather Crew (orather Crew (orather Shot Abut use Shot Bakka as	109 Archegi - By I June 1945 Departure - AB August 1946 Mar Shat ABLE: USS Mattinets (ARA 235) Mar HABIK, B <u>BLIverat</u> Mattar: BIS yards (243 maters) MAR 1949 mar Kwajalaria	V Jugazi Cb15 (1),5 .255 (4),0 16 Aug_2V 0015 (515 (245)(515	Boasted by 11 per and backage operations
task cold and	1 Function	La Require	Give charaterred to U.S CLEME (AD-04)
Attoyet Fludget G <u>e</u> r was	second in 70 (12.5 (Destinyon Solit) De- bivision 4. Naytest substituted for USS (D) 364) as a target exact Decade Flus- in Secter mechanical condition. Mysrang's	1 August CBJD C915	Boarded by 5 and to readyr equipment.
Shat Agid ;*	s evacuated for each sens. July, 99201	14 August 2815-2115 1345 1545	Boarded by Lumon too Inspersion. Boarded by commanding officer and four pin.
1 July 1427 1619	Al, whitpo to new too 9 terco (Pportod to distogicably clean except target sub- matine 125 Fasche ISS-160: and <u>Maytar</u> t. Target shipp <u>Respond</u> , <u>163 Locgiand</u> (MPA	35 August (8,5 )045 (390-1545	Bearded by the set for calvage opera- tions. Hearded by 21 men for inspection.
1757	95), USC Gesc <u>insde</u> (APA-85), and USS <u>Builte</u> (APA-65) while reported Geiger Sweet by redsefe betable Ongota reported Mayrant Geiger Sweet	at August date 1045	moveded by a 21-ban without party.
3-11 July	(Reference 6, pp. 7-1 k-14 and 1-1-k-58). Cree reboarded and lived aboard.	75 Aligus:	Boarded by whichen Stied seam of all Lease Seven men.
	25 July, 50051	27-28 August	Boarded by an unidentified neer of at least four wen each day. Creat transferred
24 July	(for everyared to <u>Bos</u> ci <u>n</u> eau.		bu remarked (arget ship (53) minute fact 621 for :tensporestion to the United States.

## USS Mayrant (00-402)

28 Augusz	Ba <u>ysani</u> deremaiss:coed, undereay to Kwa ]alatin.	B August 0912 1505	Shifted a subscrime mooring buoy is the Vicinity of Ecochecht Estend.
20 August	Arrived at Kwajaleju.	1505	Anchozed in best 20.
	<u>y85 mtH21</u> p (A950 2)	9 August J 209	Anchosed in Decth 2008
Start Alel Shar APIE h Shal BAKER i Decomposing	19 1 Arrivat: 9 July Hith 1 Departure: 4 september 1946 scatton én route La Guajale:n Fran Pearl Marbor Iocatton: 12 mml (77 km) Sf Stun Socatton: Los Angeles Theamante D January 1943	16 Angest 0836 0910 0927 1428 1428	Cleared a lowled purple on target sub- mating USS Searange (SS 1965). Worked aboryside carget submarine (USS Pajone (SS-384) to recover the stream anchos. Subtained damage from $Parche anda could of the two versets culling together.Anchored in betch 2008.$
	telfusction) . a salvage litring ship, was a aserat⊭r af .	11-53 Rugist	Anchosed in berth 1086.
<u>tu l.</u> Səlvaç Ferfor	1.7 (Servery Unit). Its functions inclused ind demograf incide values effective tests, ming vacagency experies, and lighting fires. In moved monting buoys, and label submarine.	14 August 1470	Mender was put in finating drydock NRD 29.
-	r. 1 July, 8906)	1) August 1546	Out of Electing devideck ASR>29.
	Residual from Posti Marbon at the time of	18-19 RUCUST	Anthored in beath 30-
Shot ABNE.		19-22 August	Anchored in Bising Lagoon.
o July Oseb	Mexiced La USS <u>Palmyr</u> a (ARS[1]3) at BL kins.	77 August 1602	Moored portside to ratger ship <u>(23, Pailon</u> (APA 5)) to set propo and generatory
LC+23 July	Sourane activities, Dikiri Acoli.	) ANG	eboard. Underway tros Pablos ro anchorage to
Shat BAKER	(25 July, 0835)	1840	vicinity of free lifert. Authored.
24 July 1250 1259	Redsale monitor seported augard Herdyn fot synt Baken Underway for area Mercury.	24 Xuquart 0.155 09:00 09:01	Stowed hose and pumps for sea aboard far get ship <u>USS Persacolo</u> (CX-24). Auchored in Perto 1296.
25 July 1155	Anthored in easigned anchorage west of Shen Island.	25-21 Jugast	The crew prepared LCMs. LCVPs. and four pontion barges to core out diking beach.
29.5014 1835 1982 30.5014	Fianted a mooting for a submarine in the vicinity of Jopchen: (sland after shill ing betthe Anchored in Blain) Lagner.	SI Pugusi GADQ	A beach party worked on target vestes LCT [155 (sic) broadside to the beach about 50 yatds [45 motors] off. Divers hooked up elt investitions to blow the tanks forward. There were excessive holes in the center live and the statboard
¢900 1279	An incompetion party maps aboved and reported on the damage sustained to Hender's buildering ChusekKikoki.	4 Seprestor	tanks forward, Anchored in Bikini Lageon
Avgust   430-1720   731	Swung the siver of target ship USS Hughes (Du Wildt Into Nobini Logeton, Anghared mertimers) of Kaeu Solard,	N528	Underway with 3% (unnumbered) and (arger vessel LCP J018 in the for NeajaBe(m. thence to Deart Harbor.
			U <u>SS MOALT</u> (00-693)
5-7 <b>λ</b> υχνει	Anchorege 1,500 yards (F.A ≥=) sourt of anchorege 1,500 yards (F.A ≥=) sourt of anchorege 316.		47 Arrival, 5 june 1946 Departure ID August 1946
T August 0740-0846 2355	Retriewed weights from thight subwering (735 Turns (SS-200). Removed a radioactive (-170 inch wire	Shon ABSE Location 20 mmt (37 Jp) SE Shot BASER Location: 19 mmt (33 Sm) SSE Decontamination Location. San Francisch Operational Clearanor. 19 hovember 1946	
1005	cope Anchozed in berch 30.	Flug I Clegran	(e. 11 December 1946 (Breverton)

## USS Moale (00-693)

## USS Mount McKinjey (AGC-7)

	The Cest Each Par Endloact	Lunction (oper Moale - was a member of TV 1.3 (Ber- coul, Destroyer Division 72, it measured (Viey, they water warples cutoide the la er each lest, and conducted companying	27 Coly 0547-0826 1252 145* 0702	Concolled recipiogical and operatorraphic investigation of oil sizek. Conducted rediologics, and operatorraphic investigation of oil silok. AnopoleS is borin 369, Sirich Archi
SHOL	A9.5 (1	Ja <sup>2</sup> 7, 09001	ZB Cuty •925	underwar (a contect a replacingital survey
; :1	Y (558	Underway from breth 386. Biking, to bible Point Rogae.	2018	off the western end of Pining Acol. Stopping at 5-mail (5 mm; intervals for severeproduce and redicussion, surpary,
	сн 10 субр	Commenced Clicitog Grotil Potnt Sugar. Received outside of survey danger area as prescribed.	29 Juny X 01	Reported carrying out suchningscul pa-
	1102 1214 10-6748	Entered the lagoon Anchored of: Enter Scient, Received contractorized water samples find Anchored contractorized water samples find		(50), thete studing and value tamples of Bohdeatal and Decken talands. Scopped every 5 mmb (9 orb by type pointing and
. 25	0 1255	Elect dome bost. Received contaminates wheen samples Economy the period oppoint laws, which samples	6706	wate: samples, Anchored beach did. Ricin: Aroll.
		Alcard 16), Time elapsed from ABLE det- onation until water campies were on bound was a induce. Ve chartes (Reference 6, p.	30 /ujv J Ave	quat Rothered in perch 189.
	0.65	Siderway time Bikink Asit, to Kestelet.	3.5 Avgist	Accessed in Degab King
	2141	An Gea Island: YTP-bal care alonyadin fee economics of the weyne samples.	5 Atuquist (732	Unde tray .
2 24:	Y 1047	Returned to parts) and twated to USS Chili	6-2 August	Nachared in Death King.
	1428	Reakie (80-14) in betit 324, 918143. Undermay in Maria Mariaki.	7 Areguss 2755	underway to with betthe.
6 349		_	.505	Anchored to beach 305
	1920 1352	Mound to Real Factor Underway for Dam Francisco	waterclove waterclove	Recto: sera, Megrig partscapated to guodery
11 44	19 1125	Maarad at Gam Maata 1990.	.D August alts	Codeceay for Heart Hatbur
16 34	су 6892	Lodelanag Stob Gen Brährlinde to vent. Heckor		AP2 WORMI WESTERIA (MC: 1)
18 20	1.		- Crew Siger - I - Siger - I	Hadiyai 2 Jane 1946
	0/37 0758	Anchured as Pearl Norbor. Underway Scus Pearl Matgor to keyholeth.	- Bi⊾ana Ainal: Stat 48:5 .a	Centertare: AG August 1946 talton: 11 mat 420 km (41 calton: 8.9 mat 420 km (41
Shot	SARLY .2	5 July, (895)	Dec instantings Operations' (	lan Locathainn Sen Clean Cleanancer: 26 December 1945
29 34		· · · · · · · · · · · · · · · · · · ·	Final Citara	rte 29 January (38)
	2015 1134	Anchored in beith 10%, Kunisleich. Received aboaid passencet observerk and (ediplogica) oceanographic personaul.	Farition Mount J	MyKipley, an arphibious force flagship.
	194.	Undermay (tur Kwajaléha it éres Mark. Bakiri Acoli.	eo faec De copel o 276 de c	at the task force flagship, soveral key were forsted aboutd the flagship, including toleromoutleasters, and the staff aerologi-
25.05	119 0946	Recoveried to are Math.	cal only	ŧ.
	0110	Comparison of a second se	Shos APLE ("	111y, 0920;
	1902	Anchored at Stidel Aculi.	1 Daiy 8511	Otderway for ARCE operations, proceeding
26-5;	агу 1615	Chiderway for a ratiological patroj out	0800	The Assigned Station in area Creweblet. Referenced to keep in analyzed station in Analyzed at
	1015	side the ingene. Sighted bil slick, Manuevered of Variaus - recture and speeds to decemine boun-	0921	in area Chavaoler. Frank deconared quer she rugget ship array Sh Bitish Lagoen.
		dathes of all which and maximum redic-	1546	An nored in Derth 191. Sixing Lagion.
	2905	Completed taking water samples.	2 July 1300	Antipared in perify 1/2, Biking,

8-5 050y	Unchoosed by Seri's (12), #18(n1),
3791 <b>6</b> 02[8-17]	5 July, C834;
25 July	
C5.8	Underway for HARRA Day exercises.
0680	Steaming re Pajorato postrijos to area - Chevroles.
6835	Boeb exploded benesth catget artay 14 fik(ng pagoon.
6928	Received Swebel orders to close to the
6925	Began waneuvering to maintain position approxysately i smill 2 kmt west of Kiwini Real
i7.9	Anchored in Swith Filer, Billini,
28 Coty 1127	Analogieri in abolieriage Abila, Hiking.
10 July 1840	Assessed to second 12. elking.
LO Muquat Litte	Underway for Pearl Harbor.
	<u>455 MUG4000</u> (05-389)
Bisini Bigali ( Crew Location Crew Location Shot ABLE Loca Shot BARRY Loc	95 trival. 97 'June 1945 Weberlate: 13 August 1946 for Shot ABEF <u>955</u> Balt <u>ineuv</u> (APA 205) Ter Shot Bakik: Bak <u>tineuv</u> 1946: 2.690 yards (2.6 te: 15) atton: 2.595 yards (2.6 te: 15) 1948 news Keijaleic.
CHOREARCA) Cest. E:	Function cover Mag <u>ford</u> Massia tangus vessel during Xi. Its graw war exacuted before each was a menter of 70 mills (Destasyer earroyer Giviston 1.
Shel ABLE (1 .	lu <sup>1</sup> 3, 0900)
30 June -	
0900 1120	Teams d'aart D'usta uite shibp. Captern and Team A teat sailp.
1111	US <u>S Cheora</u> (AN 55) reported that a board Ing party was on pusch Rugtord.
1174	Hegeneted Gelevi sweet by USS Sharataton (AN-98) (Reference 5, pp. 1-1-4-2)
1530	sh(augn 7  -2 29).
0001	Capitale and Tease # and B and last #Inuie
1501	Inspected ship
жу 4 Сију г <del>а</del> л	tubl crew had returned to Bog(ord.

5-21 July Crew aboard <u>Bugfo</u>rd.

Shar SAKEF (25 July, 0835)

24 340 Y 0910	Toan o best the chap.	
0945 1070	Teep # left ship. Captain and Team & left the ship.	
79 July  )07 Jill	USS Correct 1045 22+ reported that	;13
	Scarding ream was aboutd Mugford.	

- (4)2 Constraint was instruments that would bases and other instruments that would no compare by water and wash down <u>Haptord</u> with high-pressure losses. Subsequently, the orders were changed to wash down cally.
- 1515 L604 Current washed down Moglatid, taking core not to but the instalments. St was not to be boarded after the weathing tendos ency 6, pp. 7 J B 42, 1-2-B-44, and 7 F B 455.

36[5 i618 - Boatching Lease abound.

JU July

- 1059 Cuttont sent a banding translabord to tenove instruments.
- 1108 Boarding ream required and JSS Deliver (ARS 21) was directed to cover Regiond with Loan.
- 1409 Furseri reported that 51 had conjugated vashing doen Ruggard.
- .419 Delived reported that it has reached its rediploying topic topic and to reached its fort was 90 percent covered with foar 1514 USS Clarp (ASS-52) seconced that the depicted
- 1514 USS (large (ARS-12)) separated that (Augtord els Covered with Scatt.
   1541 Fixing reported operations (explore (Ret-
- 1541 Flag: reported operations complete (Reterence 6, pp. 1-3-8-55, (1.8-52, and 7-3-8-54 strongs 7 (-8-56).
- (625 SWT-10 reported chain vorvey sufficients 4 to 14 R/24 hours reported.
- 31 July J316 Gusta<u>si</u> reported that it had completed washing daws and inspecting <u>material</u> (670-1614 USS <u>Recipiers</u> (MRS-421 came alongside <u>Material</u> and planed scoling(distant (ke) exerce 0, 59 7 5 8 63 and 7 (-8-0)).
  - 1907 DSA and radiate wonitors completed inspecting sh<u>eets above</u> and below decks.

Redipication conductors were such that performs of crews could be pollaborated for carrying aut 65% decomposition procedures for target vessels. Reglate had between 1 and 4 feel 10.9 and 1.2 anters) of easer accumulanted to the engine billion (Reference 5, p. 5  $\pm$  46). Reglated technology to date the shat beach

- 3 August 0600 Cosmanding offices and boarding party aboard and reported thip Highly radion active. Pulgoing operations conducted in the affectuation.
- 2.7 Puquest Scandwell dailury for decontamination. The to four hour shifts used with total size about 9 hours per day.
- 8 August Decomposition Lean Absord (or 5 hours. Mugiotid crew transferred to USS Rockwak) (APA 2101.
- 9 August Decodomination team aboatd (a) 4.5 hours.
- 33 August Unidentified team of all least three menaboard
- 25 August Drinalysis made on did Sugfard case by 180 tasses (AH 12) case.

## USS Mugford (00-389)

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19 Xagasr	While of Mogford's chew transferred to ea- manned target ship <u>trav</u> Fl <u>aden</u> (APA-53).	8-34 JLIV	Engaged in routine activities.
14 August	Tewing and archor team aboard for 4: Binates, Toward to Reajoints,	(4 July 1005 1154	158-196).
2° August	Anchored at Weightein.	3245 3743	Heilbanted Langel Kubernice 195 <u>. Au</u> sgon (192-508)
21 August	Newrage Topylde Geige: cooling 0 té 9724 bours.	Shot 844[9 ;;	25 Jany, CB350
29 Xaqusi TLGP	<b></b>	24 2aiy 1149	Jalenway Scom Bikinh.
1101	mygford de oratosteret.	05 July 10/0	Anchated in Rongelay Atoli.
	FŻŻ WINSEI (MEL-151)	)1 July	
	Arrheal - Wh June 1940	1725	Conternary from Romaniap to Hindels
SMOR ADUS LON	Jegarture – 28 August -945 Gatton – 130 een (241 em) Sk, en touto from - Bistri 40 Swajafele	11 July  113	Anomated easy of Mesto 168, Boxing,
Secontin-inst	srethung tools 70 km/  37 km/   Top localtong San Franciscu Clearance, 18 Muyempur 1945	; Augurr	Rectine activities, dos (neolect with target ships.
	riegranie, in duventur 1946 riegrafia Agril 1983	7 Acques	
		2721	Proceeded to wash down catges ship USS
	d Function way a mether of TV ) fill (Repuls and Ser - 11), D' served pointaily as at skewn tag	6754	Mal <u>ph</u> 15190 <u>1</u> (10: 393). An choref.
1. 55	stained material and repair facilities essets, and disposed of deck catgo domain-	3-4 809054	Bouthe activities
(100	•	t Naguss	Radsological monitos advard (or commune period of time.
2401 4845  .	261, 3400;	6.9 Aug14	Routine activities.
30 30r# 1632	Underway [/om blkin] to Resjulate.	10-17 Acquist	Manameter taiget ship <u>utat (311-121</u> -10) Variova anchocages.
1 2019 1915	Anchored in anthogage Emits 34. Rwaja	1: 8-9-11	Animored with US (25 moored alongside
1941	bein Shifted to beach 80.	24 August	Manusyered 25 125 to various enchorages.
t John y taga	Underway Loc Similat.	19 Arugnos 1416	Mena sinnaside target ship Prinz Eugen to prepare it ict towing.
γ .is.jy 6861	Moomed pottsäde to USS Quarte (LM 150). Anjeleät	20 August 1239	Inderway for Kuthalear work F <u>lanz Kug</u> er. In Low
5 303y 0906 0839	Switt(gwed andmontilien from farger phag 1995-80.	22 Muguwa 1632	Arityod at Kwajaleth ood LobGraed (ow. En poppe to Sikiri.
6858 0359	Refisered annumation from target ship <u>USS</u> (ST 52)	23 August	
1020-1000	Setrieved unrunition iter target ship das	( <b>1</b> 4)	AGUNGED TO DIRECT ACCES
2200 1348	Retrieved summities from earger ship USS . Lot-220.	24 August 0915-1155	Proped target ship 806 Gasyonade tapa
1307-1346	Reictwied analyticalities from target 5%1; JSS [ST <u>-545</u> : took on 10 Arzy personnel to		85).
1505 2522	asakst in handdiing ammunärich. Reisteved ammunition from target ship (QS) Rugheg (Ox 410), Ammunitiwe disposed of allong.	25 %tguss 1(32	Beparted Hikini Atoli towing target ship 1955 I <u>ndeper</u> dence sivi 271 to kwajaleka.
2128	Anchored abreast of tarbur entrance con- tion vessel after dumping amounition.	27 Жодивт 1453 1654	Aridved at Rompaleth. Chilethogy is Mikiri.
1 JULY DB20-3943	Stoud by to assist in moving target stips ( <u>32: Pennytoin</u> (CA 24), thi Reyade (85-36), and US <u>S Sait Maty Cliv</u> (CA-25),	28 Nuquet 0962	Anothernet in herith 225, Birjal

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#### USS Munsee [ATF-107] 28 August

- Underway for Avaiately with target ship 1753 USS Butte (APA 68) So tow
- 30 Nagust 1176 Anchosed at Kwalaleba.
- وتصفحها لالا \$913-L020 igenitioning based care on resard to clarck the radinactivity.
- Departed (of Pear; Hechor, 2 Sec. 244.0

#### (CEP-00) WIT2UN 220

Crew Shae 112

- BALIN: Ato'l Arilval: Ex ( Jone Asab BALIN: Ato'l Arilval: Ex ( Jone Asab BALIN: Asabl Geparture, 28 August 946 Trew Location for Skol BALIN: BUILINGAD Crew Location for Skol BALIN: Builingad

- Shet Aðit Lacation 2,141 pards (1.95 tal til Shur RAKEP rucation 1,785 pards (1.2 km) 5M4 Sher 28 April 1946 mear tuajalein
- LASE HORE AND ADDRESSON The destroyer Budgin was a medical of TV 3.2.2 (Destroyed Unit), Gestroyer Division ), Musign was a talget vessel define CROSSROUDE. Its crew was recover before both shots

Shut ABLE (1 July, 0900)

HG Size

0924 Competend evaluation, 2016. 1100 Captain with linal evacuation group de patted for Bolyinega, Last-sincte perconvel renained aboard to start diesel generator. Entite ship's company with exception of (lue men in the tast-minute personnel group perthed appoint Bollonoeu LON APILE.

I July Wattre spip weakaated.

- 2 July
  - ivo: USS Shakawayon (AN 88) separated a board and them abound Musicia.
  - Statement of bot doubletent 1129 Must In. 1615 Commanding officer with feam & of te
  - holesting party columned aboard with Get det counter, mostor, and selected whip's per sonne l 1575 mean B reputried azeratid and conventions do-
  - speny has of white below decay. 1600 Test C reported abraid.

) July

- jaca Tess Disestored apparel.
- 3-21 July Come Breed shoard ship.
- SHO: BAREN (25 JALLY, 0835)

21 July

0820 Туми С мунсцикано за вокульщим Гор Алибр. 75 Jaly

1017 Proceed: too it campbelles it can also been last minute performes. 1206 this evacuated for RANSR.

- Use Preserves (LHS 8) directed to proceed to farger ship USS\_Majjon (APA A)) tak-ing most direct factor to Musica. In was then to proceed with great caution from the victority of targer shaps Mustin and USS Salt Late City (Ch 25) to Validen.
- 7 Augent Southe know standforred from Bothinegu 1400 ug intel skotskie krige (APA 228).
- 1911 A reported Geliper (Gelings Average ropside 1.1 8724 hours, marimum lopalide 6 8724 hours, average bojom decirs 0.2 8 Magust kr/24 hours, manipuge below decks 0 35 8/24. hours.
- 9 Accust 0930 1450 Commanding officer and a selected group of officers and we while reducto monitor boacked Nassby top a guick inspertion of the shape (majerijan completed and party returned to Hockbaldge
- )2 Negast 08)6 (100 Commanding officer with a selected group. of men and a cadiological soniror boatded Heat he conduct salvage operations: Add personnel neturned no Romanidge.

24 August

26 July 17:5

- 3860-LICO Salvage operation group with raduate nonstor bearded Busels and resumed salvage operation: all personnel returned to Recktridge Average repside reading 0.25 Rocktrische R/28 hours
- LA Record Failoge operation group with a radiate monitor boarded Muchin and resumed cat 0145 1600 wage operations, all personnel retained to Rockin Idee.
- [11] A August Transforced 28 part to Woolmaall.

28 AU-3951

- 1600 Restlin des statistical devel. Transf. To Anala. lein.
- 16 August Restricted at AmericalPlus
- 10 September Average Lopside ceuding 6.12 R/24 Hours.

#### 416610

Crew 51ze 172 916105 Addit Archests (28 April) 1946 Crew Legalion for Shot 48.7 USS Rockingson (194-229) Lane Legalion for Shot BARIY Rockingham Shoe Adel . cratten - 782 yaras (115 BATER's) FS: Shoe BAFTR (cratten, - 745 yaros (581 meters) hay Sank Jo July 1946, Bikini cagodr

Take works word Function. The captured Japanese Dattieshap Wegaje was beener of Tell.2.1 (Hatelesh); and Crusset Unit), Ballin ship Otelstva 7. serving as a target union; Its CNOSSMOLO, time, concored of 3.5 personnel, was transferred to Recklighte before shot MR.C and did not entern to five abound, it participated in setentitle experiments entrying barrenesser gauges

### Nagato

350,050,01	(939, 0313)		Introducing and the vessels continuing to Section There was no glunge (o sologance
30 June	Communication of Recklinghout		These the second s
ar ucuy Quha	tes <u>Clamp</u> (Ant 22) countred a fire of Names of firmand No. ) (anos) (Reference	10 041 <b>9</b> 6720	Bengato kathe in Kizini Lagenn.
1962	6 p. 7 1 A-25) Clang (epotted a filte on Ryghtol- park Kide bow (Reference 6, p. 11 A pl).	- thips The I	eer was transferred to other CROSSBOADS wajorbly was disparsed awarg Upp Pall Arver <u>SS Applins</u> (ARS 56) and tatget ship (2 <u>33</u>
.416	Class reported Registry starboard glacter rediciogically safe	na,ti yang Qj	The 251 car of Ruppers
1508	Clamp reported Almericus small fires on Magazin which it ext instructed to en- timatish		::SS NEWADA (98. 36)
152: 3 July	Lings reported that the inspection of Namato was complete (Selectment 1, p. 1) 5,121	– Stkint Algi'	491 1 Ar-Alvan, DR 20 Mig (946 1 Jeparture, AS August 1945 1 Jeparture, ASUR: <u>US</u> George (Agmer 1 Jeparture)
1175	A fire was repaired aboard Nagaro, USS Preserve: (ARS d) mas provided to inspect and fight the circ if it could be to cated. <u>Propagyes</u> man upspic to these the fire and propaged with its provides assignments.	Sho! 4310 La Shol skr[4 4 Cecartanknas	ne for Shot Bakike (Çiyemi) Kationin (Shi yarûs 1636 meters) ( Soationin (DuC yarûs (Y42 meters) tis Son (Sonationin Kwajuleln and Pearl Harpon) (1943) off Pearl Harbon
a Y Duly	Millin Kagado re <del>nezerbe</del> ts entre leathed souadd Auskinghain nader patties boarded Bar Conget ahlp.	The Day Inatile 9. Sta	n incurrence talewhip Negada was a member of TC J.2.4 workprand Coulsey undat, Partleship Devision, was the Anoget Witp too that AbiK. The come a cast of Defair reach whoth With a post Abused
· Culy	Na <u>çat</u> a sittem tiatsförred (nom <u>Ho</u> cklu <u>cha</u> m to <u>Jos Rechting</u> e (APA 228). A waist tvam was plained Abowed Nagato.	:~~~	expectments including annunition and pri- sent for the Army annualized experiment, minibly these for the Army pignal depi- nd clocking for the Quarternaster Onli
17 July	Loberty Stee Leensanders when transferend to CBSS (Djiller (A22-18)) for friendsports tion to the United States west year.	records	naster gangen. Innear and Ingartiters ands an and fram regerieftender ged streen. Im poak-pressure gauges
ib July	Repairing Sagate transmoders returned to S <u>ar</u> king <u>ha</u> m		103y, 0923,
20. L. 25	Mail: Disconsiderand to Rest <u>an</u> bom	Hanne OF	dies operated to Cjyzer.
	25 JL17, 80351	,018 ,018	STMP Chattle imported a fire on several Ships, including MeVaga (Reference 1, p. 6,5199).
97 July 968:	USS_Requeiment (MRS 42) reported Magaio (asting to statheard and settling by the	.4);	Nervada was notes to be staldering amid ship teatoreneo 6, p. T 1-A-101.
	sterno Negat <u>n</u> bad ∎ (150mm bu,ecapite form about 50 tean (15 meterni) (Setereore 6 p. 7 tia 24)	(11)	1995 Hexildiner (1871–67) algegelde Gevale Cighting the line (Reference 6, p. 7-1 A-185)
28 Cuty		2.2019	
2945	When Perlature passed ways a to fix about the second secon	1225	- USS (Kosejye) (Akt 6) put a boardung pasity on generala.
	89 stailoast (15). The staily increase is list and setailong by the super test.	, 2%e	Preserver reputted underway to flatt. Ites on heveda s portular.
	caled progressive flowters). Nagato was	1308	Sides entinguisted.
	- Thighly extremelyes, previousney retrieved the los pumping of towing (Reference 6, p. 1 (19-28).	(5)) (541	<ul> <li>(1%) Large (#%5.00) separted a line on Newada's No. A surret, Company mouthed allowestime sense bearding.</li> </ul>
1512	Periodue: reported <u>Mag</u> ato's main fleck		te m about d
33. K.L.	awash. Disting to starboard, and down by Car Spectr (Medication 6, p. 7 ) (a 34).	1545 1605	Fire party abcard. <u>Ciper</u> separted the fire on perada estate gatated and large party setured to Clamp. Contacted and large backs
γ) το τος 10:5	Bet <u>in</u> tmos geouwi ka <u>dar</u> u in olashashi. Nagalo bad taken og mare list was hem	1641	ineferance 6, p. 7 (A+12). Remoting party territored from seveda
	9 feet 18 meters) former 1 14 6 been (5.5	9 1019	
	meters) its, and had a solerance of the	1091	The captain with respecting party A re-
:651	l I/i tours iReference a, p = [13:19]. Renisire: reported Magard & main deek geath an one starsmard side, ind (16)	14:0 14:50	Furged to active to fidepect damage Member of Puckar of Schlance with inspec 1200 party of wight Bar rows atmatch.

- reconnecting party & re turned to whip to thepe:// domege
- 1610 ECst Henber of Puckan of Orditance with Inspec 1200 party of wight and name abraid.

## USS Nevada (88-36)

## 3 July

- 1430-1650 Passy of process about.
  - kebbarding party B bearded to inspect 1565 lower decks and engineering plants.
  - (2)0 twowery officer and party of tes guards mates returned to ship to inspect all Period Stream
  - 1735 Capitaln with rehearding party & returned to Clymer.
  - Poarding party 3. except for security 1900 wetch, departed for <u>Clymer</u>.
  - 1925 topher of breach smoothers that's to excel radioactivity of ship.
  - **IVJD** Navigator and security watch of three officers and sevenices collisted cen case aboard for the plane.
  - Remainder of B party resurned to Clymer. 1946
  - 2032 Capitain recorned to ship for the stight. Reducatively toogetates party left chap: 2040 ship found clear of radioactivity except all of Frame \$14 on main mark.

with the exception of a 20-min netwrity watch, Nevaga constned evacuated. After several days of radiological zenicosing and repair work performed by various board. ing terms, weyned was found safe for reboarding by Six deer of B July.

Shot 342(R 175 July, 6835)

- 24 July -Crew wyacoated to Clywer.
- 30 July ATA (60 reported reduceding Instruments 1915 izon Neverla (Rofesence &, p. 3 3-P 51).
- L August

LCON Inspection by USS (Willset (ARS-23) was completed and revealed several to be very radioartive. Delter a boarding reat comback on board (Reference 6. p. 1-1-P-58)

- 2 August Selling worked for a 172 hours on younge using high pressure water hases (Refer ence 6, p. / F-P 74).
- 1 Bugu:11 1000 1015 Three-mon tree reariled for import (or,
- 9 Autor:

0745 Commenting offlice and 22 men loverded

- Sixteen per recurred to Clymer. 1325
- 1340 Years & and B bounded.
- Commendating offices and Trans. A and I do 1645 pacted. Getype: readings on quarrenteck 1.9 F/24 house. torecastle 1.5 F/24 Number of Contract 
9 19 Muquat The entire only was not epened up not completely inspected due to fack of they. other work requiring tweedjate action. and the stable cobinically bigh reduced by May, These were no literal of ealor damage apparent than appeared to have been caused by FAKER. However, the ship was Still blobby cathoactive topside and in some spaces below deck (Reference 2).

- III Jusquar 0745 Commanding officer and 90 men hearded. 1015 Type of 23 per poarded. h group of 104 men returned to Clymer. 1130
  - 1315 A ream of 89 men toarded

#### USS Newman K. Perry (00-883)

- 1630 Comparising affices and 90 men serus red. ro di<u>yme</u>ri
- 12 14 16 August Small groups of non-Neveda crosseebers beginded each day, probably ship traped rion reass.
- Acquett
  - 0930-1260 A rediclogical wontron and dive embisted ben coturned to several to remove special equilipment -
- 17 August 9745 Nine men boarded.

0915 Commanding efficer and 101 have boarded

- Team of 58 men boarded 2215
- Team of 20 men departed. 1925
- 2715 Constanting officer and the remainder of those abunce departed.
- <u>Wev</u>eda o crew stansferred to seconded Larget cNLp US: CostLand LAPA 75) for off August transportation to Westalein.
- F9 Budgetet thered to Keshateth by Erendever. Seven: wan onchos team aboard Preserver from Servada.
- 22 Regains Arrived of Awajaiein.
- 27 Accus! Average copside crading 0.6 R724 hours.
- 1 Ocsober: Average togolite reacting 0.4 6724 bours

Mercoda was folged to Fundi Burdrat [of cedio[ogical in spection, achiving 15 May 1967.

#### USS\_NEWPLA K\_ PERRY (DO-883)

- Criew Shaw: 280 District Atol) Arrival: 5 June 1946 Histol Ato's Departure: # August 1946 Shot ABLE Lucation - 20 nml (56 km) MM: Shot BURER Localian - 10 nml (19 km) MM Recontamination Location - San Riego Operational Clearance, 17 January 1947 Float Clearn-cr. 75 January 1947
- last unit and lunction The destroyed very way a evenes of TO 1.6 (Kavy Air Group). Postroyer Civision 51 Iss primary mission was to serve as a plane goard for the atrictant califier 0.88 Satisfy (Over [17]).
- Shel MBLS (1 Sully, CROCH
- 30 June 1352 Useful exp [incom [416] m) .
- 1 JULY 290C According to tee the 304, 2016 years
- 2.0448 Anchored in Gersh 55 al.
  - 1545
- 4 July 2613 Children on fourte to Manjelein.

5 July

1006 Anchored in beach 33. Evalatein. 1249 Underway Ser Rot Schend

## USS Newman K. Perry (DO-883)

5 July

Buchased in territo ask, Buda 1621 7. perving as a larget vessel for CROSSROADS. Its 1736 Chargeay for RONARD come was evacuated before each shot. Among the experimente, equipment on basid were food and 6 .019 \$737 cittning (provided by the Quatertaster Unit) and Anchored postside to USS Engree (AP-69). time gowern deconding gauges BLLIN! 1011 Anchored Smithering 558. Shet #918 (1 July, 0900) 1545 Andersong in Boy Interd, Annighting 30 James :425 † մանդր Gree evaluated to mit thisgae, Delo: Anchored as Kwajalein in beeth & b. 1 Jusy 1410 V<u>55 Reclaims</u> (ARS-42) noted a suclidering 12 July 110 Of Seeman Groe Restatein to Right. tion anidships on are gash declarence 6. 2.718 201- 30 (9) 10:5 1025 Rectainer moved alongside New York and extinguished he fire stelereore 6 p 9869 Hopfied starboard hade to Richard. Hiking. Appleshed to beeth \$6. 7-1 4-151 :040 648 Team reported the ready service amonttion of New Yark tad averteated chefor ence 6. p. 7-1 A-: 1/. SHOU BARES (25 DUTy, UB35) CSS Cinep (ARS-13) next a boarding compared. 1136 24 July 5928 Underway for plane guard station. 1.42 Moonling team returned to <u>Giamp</u>. 0.150 Clamp reported New York Selger sweet. 25 July indernaly from the target ship thereence b, p, 11-A tell. 0650 Maceneering to take plane glated practice. Gen. L. Clarp reported New York Ceiper sweet 1847 21 Caly 1723 Periories Alletist Channel to traincles protograted supplies and a civilian technician. 2 July 1159 co USS\_Nouni Mickley/ (ASC 01) Commanding offices and nearding seem & tet sped object unip. No tadiation de 1427 negotied forestion. 1427 Compensed Laying to & mil (7.4 km) east footed except selephone redium marker buildes which were not rest-selated. Team & resulted aboard and compared of Staint Chargel entrance. 1650 Proceeded to noteening station 2920 on i 400 545<u>do</u> : openang up the unip. 1632 Team C recorned aboved. 1420 Team II recurred aboard 39 July 1443 Anchored in Recth Mike, Bitth: Acolt. 1.00Y 1030 Than F returned from Rockbridge. 16 July | 1958 Anchored to beich SSA, Bikthi Acolt, 4-21 2-19 Crew aboard sailp. I howards. Shat **di**ath :25 July, 06051 5912 Notired to Envires. Anchored in Berth 55 A. 11:27 2¢ July 1675 2 Rugust Crew evacuated to Rockbridge. 1442 Atcheved in borth 1. Bikint Atoll.  $2^{4}$  -tally. 1000-1200 bamage reported (down by storm). 4 Abquist. ;))0 Shel<u>himer</u> packed vies ite Rew York & portside. Wey York was very cadioartive (Retarance 5, p. 7-1-9-14). Underway for Poarl Marbor Loop Mikint 1720 Asolt. August 8 78 050y 1990 1 1.05 Nogred Peopli Hyptory Recipiers equin passed here book, which 6, p. 1 J p 281. WTF I reported to Commander Rear Ethelon USS NEW YORK (44-34) 1936 (COMPENSESS): "Further inspection of New Crew Star: 135 Atalas App)) Arriva). 15 June 1946 Arains App)) Departure - 22 August 1945 Work budicates about 1,810 tops inclosed he dispuncement with the center of grav Crew Localton for Shok AB(3): USA  $a_{2}$ (b)  $a_{3}$ (b try of additional water at Frame 131, reaulting in trim by elect of about 4 test, Situation believed stabilized and snip in the danger' (Reference 5, p. 5-D 13), Sunt & July 1948, 40 hol (14 km) SM of Pearl Harbor 29 Colly 1110 A refloregical mention boarded and ohtained a seading showing 20 winnites Task Upil and Junction the calleshep Ree fork was a member of TU 1.2.1. talerance on deck (Reference 5, p. 7-1-(Battleship and Crubser Smith). Battleship Division 0.401.

#### <u>USS New York</u> (88-34) 29 July

40 stockes.

- (2)2-tells makings down by ATR 40 tRotecence b. p. 1-5 P 421.
   1634 a tellological methods reconsided to take Geoget tellological methods reconsided to take B 461 Totecence time has increased to
- 20.563y Marchel Kown by 678-20 with a high pressure surnam for 4 hours (Betweener 5. y - 1.5 # 451)
- 14 July 1550 ATR-40 represend New York was shokoughly Scotend down using 430 completing form (Perfencise 6 p. 7 r 8 625
- I Acquist 1025 1653 Deliver (JUSS 27: completed the inspection of New York (Reference 5 p. 7 D-9 61).
- August Mashed down therburghty by VSA Preserve; (ARS-B) using high pressure accurate, Arm scrue; was to report Genger readings from about 50 peer (its metric) before and at the meshing (Weierence 6, p. 715 9.70).
- 5 August 1000-s500 The initial beauding cean beacked the ship for denoteringtion operations. Reaterial sadiation economics aboatd New York was 0.625 2/0; Average chailing as the time of the last survey was 0.157 R/br.
- C August Washdown non-entrie completed by a two (000-1500 Capterin boarded ship with leftlat non-diing team for inspection of ship.
- 7 August
  - 0000 1000 The first decontamination teams the ship's company bootded. Four Lears were used and were rediened every 2 hours and returned to Rockhildge. The day was spect joilssound spectra, mighty rationality esterials, particularly debits and wood frees. One group spect the day scaling for boster compound, hys. constants, strategies glower, budge, with Kenthaler was provided by Bockbildge. By variy attended, water was obtained from the filement, water was obtained from the filement, which particular attention being paid to the forecastle.
- N August

0500 1545 Your twate were alward for 2 hours wath Necessary working excelsive were new assymbled and denotrabilities were new assymbled and denotrabilities on the Sone canade heyar in earnest Solutions of batter compound and type were used, and the Some as the and the were all the Some as the loss water denot between the Some as the loss water the second deck were also started and number goals of water removed, decise closed by, and there goal startsheered up

9 ликрыст

6830-1545 Four common were about our 2 means each The forecastle was again washed down and holystosed with boiler respond. Ive, and pend. Persimater still had to be bruied from Nackaringe in cens. Approximately (00 men worked on the second deck and obscholeship progress was such to clean ing up the second and third decks and the officers' quirters

16 August

0800 1145 Four secure aboard for 2 hours such. The lorecaptic Way again polyateries with builder compound. The wahed down with builder compound, the wahed down with baller compound unto type, the mate dock als watched down with saltwater (med steries 4).

Table 3.5 Shows the costicat obtained to reducing the forecastic s redicatrivity by bolystoning with boller support. (we and same

7461# A.S.	Prioritanthatton results on USS
	New York (BB-14) forecastle

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-		
Readings	(8/24	Dro L

.

Frank No.	J Aug	8 A.u.j	2 Aug	ið Aug
		•	-	
Eav	1.6	07	0.7	0.6
105	1.7	េត្	95	9.45
105	1.6	6.5	U o	0.5
.105	16	6 62	23	0 5
2011	1.2	1.7	65	0.4
10.5	1.5	• )	0.6	0.6
HIP	1.1	: 2	P.5	0.5
40.5	2.0	i I	n e	0 5
106	2.0	5.0	0 /	0.5
		-		
_				

Source Relatence 4

14 35 August

. .-

The reduction in redicartivity on the ropside pair dets  $\alpha_2^2$  from one wouldry with sufferied to reported in 7-bits A h

πεδα ιέχη	the lease aboved for 2 boots each
16 Jugens	
<u>бноо</u>	Knybbeectiky party about the Make Contest
	clars to receive power trax Rectains:
Dauc.	D5H Inspectaton packles and shap anoped
	tion parates aboand to collect fals.
1115	All parties left ship except an engineer-
	tog party and surpling detail
1012	All fands clear of ship.
17 <b>a</b> ogast	Two Serves inhogen 2 172 hours want
1106-2000	hangling decails absord.
29 August	Two teams among \$ 2 177 mount each
0000-1125	Pumping detail aboard ship
1300-2000	Humphing denail aboard ship.
(9 Agentis F	Your learn obsard (or ) hours name
a#60 11:00	Sumpling denation ship.
08/0 1500	Ancher desail on ship
1300-1660	Pumping detail on ship.
20 August	Two trans aboard for 2 1/2 hours each.
D8CO 1130	Peeping decati on ship.
0000 1000	Another details on ship

latie 4.5. Deconlamination remults on 825 New York (BE 34) topsker milin ne,k aft		kinsi ulearande, ki Nokonber (946) Srivopee ne (950				
		-	( 1872 <b>6</b> 1	Masi	t Mei obai sanges	an attack transport, second in TP 1.2.6 pt Type Unit). Transport Division 9), as a vessel lits crew was evacuated sefece each
é la te	Mo. 1 Aug					We Deschermanter Unit 194 placed form and 9 aboard 11 for experimental purposes.
• -					SHIE MB.S et	1.1y. 6v00:
10 70		· 6 1 2	1.2	1.3	20 June	
RO		3 5	2.8	• •	06 2004 2005	Comprised evaluation of Midgang crew to
4U		10	08 - 1 1 5	0 Ý		Fogtheld.
90	s 2 i		3 5	Č E	1528	Mayibuid, with all personne, spourd,
*	6 1.7 60 2.5 22 1.2	12 77 08	64 364 34	1 C 2 G 1.C		utderway to operating erea about 16 mml (3) App mast of Siking Acola.
	cs in	12	ĭ.o	2.9	1 cuty	
i)	GP 12 IN 2.0	2.5	2 () 11.45		1101	(2)≤ <u>Oneota</u> (26-85) sent a true aboard biogene.
	22 (.a) 62 (.a)	1.5	0) 1.0	1.6 2.0	(115-1256	ATA 192 (ought a fire on Miagata wilhous beatfing in (Reference 6, p. 3-1-A-B).
	(* 1.6 814 8.94		0.8 2.3	a. *	1624	- Orgena Tram 5 separated Kingasa Georges seper "Reference 6, p. 1-1-4 121.
			· · -		1610	s <u>Stegary</u> declared. Steen of Fadiological Contamination.
Nete					2 July	
-	t ch'aologs e Referens				1.05	The captein and Tear & (Six officers, ninetter, emilisted men, and one cadibility) for multiply (and objact to proper and
						open Misgara.
21 Jungeout	tan: frazi		- 		.425	Them 2 short officients and twenty four ear- linewed news came aboard no single off the believe.
Se 24	755, V2025	or, CASR	i) isom	pide to star ting statboard	7559	The (allocation proton) months contacted to 0500. Speed (Addated):
	on. Nhài lư	thrace 1	inspect for	S Leam abcard.	1718	teda ( 121) remaining method ( year's came -
CARC 0535	Anglas del Reclator			o port to tu:		ntexet.
****	n[s], eie 103463-63	contral No c <mark>ama</mark> n a	pare .	Tarque Vesuel La Statbrard		er lived aboaid whip until 26 July.
1226	- to fachts Revisier		1.515 0	nut a <b>s</b> t	SMAL BUCKE :	25 July, CSN5)
:735	Cremence :				24 24.0	
1430	Starbourd		-	4	2036	Commandang officers and the last evaluation
1530	Nildgeon ca	st of L				tion group were reletived on bracil bag
1545	Ancione de Evagence O			lvær ager i Spislidø		1!eId.
					25 Caty	
22 August	Towns in 1	•			:129	CTU 1.2 C reported Niconis Settorogy ally clear for boarding (Reference 5, p. 6).
24 Aug.40	Acceleration at	542)6LC			1710 (223	D-101. U <u>\$S Puesviv</u> e: (Mins-S) boatdung tez∎ on .
28 August	Beel John (	iengan 1983	(AREA) -		1760 1273	Nimpera (Belletere 6, pp. 7 ; m 7 and 7 [ 1 8]-
<u>Here Yo</u> ck wa Maash 1947.	t there to	Received 1. H	.sc5.r	arrhving on 15	1724	Redsate reparted Kingara Getter serve and concentrated all toams to returnet about.
		INGRA TA	4.871		(240	Instrumentation Geen #1 went aboutd Mie gene Reference 5, p. 6 2-11;.
	201 M	CODE 2 14	(J. Q. )		27 July	
(ren ärge årnhen nyn): Binter Alail	Are heg to 1	)î Key 191 2° Aces:	15 51 1946		1022 .:44	An instrumentation (was been defined with $\mu_{1}$ , $2$ (or 21 and 255 $\mu_{2}$ ).
Crew Locality Crew Locality Shoi Abić Lo	n fer Shat / A dar Shet d	MALLI US. Macire - Ba	<u>) faithe</u> tri is 1		>9 July	Resther Goarding traw was placed on Mia- gara.
ingl EAKER .otalion: 3,060 yards (2.6 km) 5				🎋 Joly		
Фессилистик Оренистопи	tee uscallise	n. Sen A	rancissi		5769	The commarking officer and Tram & Left Registerd by reference Stegging.

U<u>SS Niagara</u> (APA-87) 29 July

- BR26 the commanding addient and rebunding Tears 4 and 8 rebonaised the ship and cam menced (reportion of it: no apparent dam dow was roled.
- 1535 Underway to shift betths in the lagoon.
- [607 Anchesred in Ge; (n 38).
- JUD The remainder of crew recurred on board with bacquee and year.

indections conducted for evidence of indicactivity adjacent to the ship's side revealed about 0.4 P/24 hours, which decreased in intervity on board to a point 5 feet rt.5 meters) from the sades to 0.1 R/24 pours. The diverge reading of compactments below the watertshe was 0.05 8/24 hours divergence 21.

- 30 July All decks and bubbheads in comparements above the number life ante agthed down with shap and water. The sides of the ship were also scraped to a distance of about 5 feet (1.5 potent) below the valetion in repower period constitu-
- i August Afterneon dedecary and put to see to each the ship's Sides. This reduced the Getger readings approximately 46 percent.
- 2 Notase Speed Increased to 15 knors (28 km/hc), however, that did not reduce the radioationic Using Europe. Upon resulty into Riktol, hogging Eines with accapets antached were led acound the ship and the barrow scraped in an attempt to remove spee of the sample growth.
- 1 August Monttor Adde inspection. (anding the ship below 0.10 8/24 hours throughout Maximum radioactivity on a portion of the ship's milt adjanent to gargaay: reading these was 0.095 8/24 hours, about 0.05 8/24 hours higher then the real of the ship. Sale distance from Magargis held executed from 5 feet (1.5 Peters) to 1 (not 0.3 peters).
- 4 Augusti Contlinend to scrape locit. Durbing 1516 Tange the antice bottom and waterithe 5006 were scraped
- \* August Ningara was equin inspected. At this issue the menitors declated the ship radialogi taily mate on all parts and gave is the radiate cleatance tegulied to depart [ref. Bikin].

Our to the position of N<u>tacena</u>'s antiopage. Notectals (real derivationshold ships mere washed equips in . To prevent these materials from clinging to its side; rewaterlike was washed down with forebodies each day for a week, and the bolica was periodically scraped. At the end of a week, another Genger inspection should a washeem of 0.082 R/24 hours at frame 68. The rest of the silp wee bolice 0.018 R/24 hours (Reference 4). The restills of one imprection should the following (R/24 hours) (Reference 4):

MIANC NO.	Porr	Starboard	
14 28	0.047	0.026	
ŧ.	9,024	0.015	

Port	Sterboard
0.037	6.612
0.060	0 048
0.052	0.024
0.053	3.019
0.042	0.012
0.019	0.812
3.006	0.043
0.036	0.012
	0.037 0.060 0.052 0.053 0.042 0.042 0.019 0.096

#### USS 0<u>'8R1</u>[# (00 J25)

Erem Size: 23' Bikkni Atoli Arrivaži iš June 1945 Šikini Atoli Beparture. 8 August 1946 Stol ABLE Localism: 43 mml 160 kml 5m Stol BALEE Kocalism: 12 š mml (21 km) M Decontaminacion rocation: San Francisco Oberational (francesco, 6 Maxempor 1946 Linal Chearence 19 Decembe: 1946

Task Unit and Forsition the destroyer 0.185 key 400 7250 served in TG 1.7 (Surface Patcoll, Destroyer Division 71, Sefere its arrival at Highlis, <u>O'Stien</u> had Special oceanor graphic and radiological equipment installed aboard. It conducted radiological patrols, including monitoring the area just inside the Lagorn entrance.

55-58 AB(1 1) July, D9001

1.2619	Stramling on risuray in encordance with JTP ) 05 Plan 3 46
1416	Compensed sadiological patrol.
1825	Stopped all engines to obtain codining) of data.
2018	Laying to to collect radiological data.
y 1/1 \$	
0630	Actived on station: commented patrolling traition.
3 July	Ar 9058, 0217, 0347, 1966, 1245, 1543, AMI 2856, laying to un station to obtain radiological data.
ولدار ۹	As COME, CAZE, 1005, 1227, 1446, 1635, 2044, and 2345 obtained radiological data on station.
5 34:4	

7 20.3	
5216	Yook rediplogical dare on station.
-0541	Renered Bikan: General
0742	Roosed portside to USE <u>Encourse</u> (AG AQ). Destin 20.
86.60	Underway to anchorage.
.000	Anthoned in beich 159 Kerin, Bikins,
9 July	
1300	Onderway to depart Lagoon.
9-14 July	Took hydrographic date
i¢ Juty	
09330	Sematered Mikini Lashoo.
5410	Anchored in borin 9(G. Biashi
15-22 10/10	Epileted ratioinsteal and bole terteal

15-27 July Collected cathological and hydrological data five Bilish and surrounding waters.

## USS 0'8rien (00-725)

## USS Oneota (AN-85)

Smot Bakka Li 24 July	25 JUTY, 0835)	1238	Placed a poording toam on recent ship <u>288 Ceneve</u> (296 66) (Relevence 6, p. VII 1 66 6).
1232	inderway for area Euclison for shot BACKS.	14.7	Reported first on USS Bladen (APA-61) and USS Brachen (APR-64) (Reference 6.
25 JOJY 0933-3129	Conducted tediological patrol of Sneu	143E	<ul> <li>p. VIC (-9-R).</li> <li>Pronomoded Secrets Conger secret References</li> <li>and Victor Secrets</li> </ul>
1515	Channe: entrance. Commenced patrolling area Soudebaker.	1452	6. p. VD-1-10-M: Placed boarding team on USS Niegara (ADA
1923	Commented downships (adiabactical parts of		67).
2150	Commenced radiological survey.	1526	Reported Wingate Geoger sweet (Reference 5, pp. VIT-5-11a-A and VIT 8-12 A).
26 July		1537	Placed bosiding team or blader.
0402-0505	Conducted radiological survey.	\$542	Reported a scall lite on the atterdeck-
1225	Anchored in berch 316, Bisini,		house of Bracken (Reference 5, p. VII-I-
1515	Jachored in betth 157, obtaining tedlo Joglicel dete.	2635	- LL A). - Elected bounding team on target while 1825
		- 144	Milinore (RPA-01)
2) JULY		1725	Placed boarding team on target ship USS
1613	while the bareb 310.	1707	Mayrast (00 002). Flaced boatding team on <u>Bladen</u> .
20 July		1855	Andnered in the of foru [s]and, Bising.
16:9	Anchored in Deuth C. obtaining rediciogy	.077	ACCOUNTED AN AND AND AND AND AND AND AND AND AND
	ical data.	2 JULY	
		2708	Coderway to pick up boatding party.
10 July		0.00	Boarding party aboard.
0000	Relieved USS Sall River (Ch-111) as lear	2815	Monted to the starboard wide of Branken.
	bor Entrance Control Vessal 4823VI.	3819	Pusced boarding ream on Bracken.
C937	Anchored 600 yords 1549 macare; muchwest	0854	Boarding team returned to Onesta,
	of berth 346.	DASS	Underway in Larget withoutine USS Parche
1.14	Relloved as MRTV.		(55-704).
5352	Nooted in besch 305. Rejieved <u>HEN Lo</u> ikey (DD-724) as MMIN.	0925 0927-3942	Mosred to Parche. Boarding perty cleard Parche.
2406	Anchored in berth 386.	0915	Reported Parche Sciger seet: (Rejecence)
	And the dealer of the	0412	<ul> <li>b. p. VI2-1-24-AL.</li> </ul>
2 Program		6944	Onderway from Parther.
DBLJ	Relieved of duties as HKCV.	1043	Boarding party Jait in a boat.
0900	Anchored in herrs. (168)	1122	Anchored in the of from faland.
1516	Anchored in Death M-North.	155)	Reported Filimore Goige: Sweet (Reference b. p. VE2-J-TEAL
5 August			
0742	Departed Binini 143000 to conduct fiting exercises.	3-4-263y	Acchored to the of Khau taland.
1236	Anchored in beath M-North.	S July	
		L334	Enderway team auchorage.
A Logard		: ***	Record to an LCT portside of UNS Palmina
1258	Departed Bikini: cr.derwey on oceanogra-		FARST[T]-31.
	phic crubse en route to Peorb Machae.	-407	Daderway,
		1012	Anchured 800 yards (121 meters) astern target ship <u>USS LSM-661</u> .
	UŽ <u>S ONEJIA</u> (AN 85)		
	•	6 Joly	Induction from 105-551
Crew Stae. Eikin' 41a))		10C4 102C	Underway from <u>197-001</u> . Laying off neat <u>painyra</u> .
E1610 4:011	Departure: 26 August 1945	2045	Proceeding to target array.
	cat'on: 18 mm1 ()) tm 50	1120	Noored to moosing bury 11.
Shot AACEA L	acation: 18 mm (13 km) SF	1241	Divderway.
	ton acalion. Pearl Harbor	13IC	Mourad next to USS Rolette (ARA 99) to
Operal*one)	Chearance IN December 1946	1825	receive class and chain for sociing buoy. Underway from slongside Rolette.
lass until an	e function	185B	Archored in booth 143h. Bikini.
	a net laying whip, served in TU 1 2.7		
	e Drach, fits main ductes for CROSSBCADS d naivaging damaged target vessels after	7-17 July	Operated in Bikin; Legoon kaying muching buoya in preparation for test BAREF.
she te	sis, performing emergency repairs, and g fires. These casks required boarding	18-19 JEJY	Departed Sugarn.
C1 115 3	from <u>Omenta</u> to Inspect ranger vessels for	2	-
(408-ç+	and radiological relevantiation.	20-23 July	Monted in Bikini Legeon, Laying instru- mentation gear.
Shak ABLE ()	3cly, 0900)	Shet 346[2	25 juje. 0015j
I July			• •
1222	Entered Biblet Capper.	54 July 24 July	Joined Cormanics leaving the Jagoon.

75 July		) Augurat	
1129	Disconted to proceed to the vicinity of	1745	Underway to shift betths.
	USS Kenneth Whiting (NV-16) to embark a	1645	Anchoted in Decth 68, Dialot
	special instrumentation team (Reference		
	0. p Vil-: 6-B).	<ul> <li>Ausport</li> </ul>	
18:0	Anchored in les of Eneu Istand.	1812	Anchored in berth 31. Bitlet
78	Destruction in the of Frank Taland	4 Aug	Restand to be the 25 without
26-27 July	Anchered in Jee of Enew Island.	9 <b>4</b> 03.51	Apphored in Deith (), Rikinj.
28 July		ID Append	
:557	Underway to change berilm,	0745	Underway to ablift tertis.
1405	Anchored in unidentitied berth is Bikini.	06071	Monted portaide of ATA 165 to the
			pareside of USS paleon (AS-11) in order
29 July 0805	l'adam en		to have reputs unde on the #2 abstilling
0935	Undernesy. Moored to cait of obtetmost instrumenta-		generator.
VII.	tion gear station.	it 12 house	Moored to partside of NTA 185 to portside
2945	Rented gear stated.		of Politon, analiting repairs.
1011	Underway to availaned anchorage.		<b>_</b>
3155	Anchored in berch 380, Bikirs.	1.1 Acapter	
N		0936	Underway to shift berth with MTR-195 in
31 July 0145-1415	Anderway by Coversment stilling star loop. De-	0950	tow on StarDoard Side. Anchored in Saith 20:00, Makint.
5-40-1413	Orderway to instrumentation stations. Re- ported that it would take one mare day	77 K	CARGONIAN DI DANG DI BUNAN MANJARI
	to complete the secovery of the vertical	14 August	
	stations. Onyota also reported that its	1252	underway to moot alconside wildows to
	redsafe conteor had been proferry removed		Lake on Freshwaler.
	free the ship.	2635	Anchored in borth 38. Bikin].
\$120	CTU 1.2.7 reported to Padsate that re-	15 13 10000	Apphored in bench 58.
	sevel of the excitor from Ce <u>ner</u> e withour prior notice made it twossible to oper	10 to Muders	ACCARDING IN: DEFICI NO.
	ore the ship.	19 жедият	
1300	Hednade supported that it had not undered	0726	underway to prom up another.
	the tenoval of the manilor.	0749	Anchered in berth 95.
1421	Anchored in berth 54. Abutal.	2015	Underway to locate anchor in wet storage
\$4.26	Qneots was directed to discontinue oper ations for the day because the modifier	t)48	in variatry of teached listend, biagol - anothered in the of teached. Inteach
	nad been semoved (Referance 6, pp VEC-	5345	Underway to shift berths.
	I-6C-8 and V[[-1 0]-B).	: 470	Moosed to portaide of cCT-1384 to port-
			side of fginges.
i August	Hirected to recover vettical stations as	3703	Underway to shift berths.
	tequested by the Technical Disector, upon	2516	Anthoned in Gerth 37, Alkini,
	complexion. It was disperted to CTU 1.8.2	20 Augurs :	
	for repairs to availary generator (Refe orance 6, p. VS2 1 65 8).	0800	Underway to go alongside target ship §53
0750 1530	Underway, picking up instrumentation sta-		Catteries (AVA 75) to supply power to
	Florid		hotet the warmer
8530	Ceased operations for the day and pro	∂eul 1035	Mootest to Cettoret to supply power to
	eveend as anchorage.	1414	holst matar.
1670	Anchored in brith 54. Bikand. Repreted having reconnered three vertical	toad	usolenway trok Carteset to accligned an charmer.
P.41.4	stations and that there were probably	1102	Anchared in beath 3), Bikini,
	where more to plok up. However, one was		
	footed and two were on the bottom. The	21 Mingapol	
	redicectivity of the instruments had	1512	Underway to bee at Inncheb? Island to
	slowed up operations. The estimate of total radioactivity received was 0.2 R	LO28	place anchor in wer storage. Anchored in unidentified berch to Mikisti.
	1Reference 5. p. VIC-1-70 31.	LOPH	successive on characteristical period between
		22 August	
2 August		1300	Undersway to go alongside target ship USS
0145	Underway to salder array to collect		$\frac{37-131}{12}$ to assist in holseling its anchor
0825	Gáuqés. Began taltecting gauges.	:402 1705	Mongside 157-133 to furrish power for hotsping its anchor.
1055	All gregos abbard, secured operations for	1150	Noored next to 178 Severn (AD-BI) to take
	(he day.		on Ereshwater.
1045	Anchored in see of they talend after ce		
	ceiving water line USS Miligram (AM-2).	23 Kuntat	
14 +	Underway to shill bering. Anchored oif Eneu island.	C\$40	Vinderwey from elongsade Seyeth to ee
1815	Astnoted off Energ 157853.	68%0	signed anchorage. Anchored in unidentified beach in Bikini.
J & Nortest	Anthored off Foru Island.	4070	PROPERTY IN ACTIVITY IN DESCRIPTION

# <u>USS Oneota</u> (AN-85)

# USS\_Orca (AVP-49)

24 August			to obtain sufface meether capacity when any
1045	underway to change anchurage.		Ships were obsent from the Bistol area.
1155	Anchored in berth 116, Bislak,		new bull p. VEI-J-13-01. Finally, within the
1 1 2 7	Underway to moor alongside M <u>ultu</u> n		dats of its indired communications facility
1332	Maarmd periator to Palton.		acco eserved in love, all realists control
		(Redete	кке Б. р. VI(-1 9 Р).
25 Amplet			
0916	Underway from <u>Ful</u> ton.	Shal ASIE (1	July, 040L)
6974-1203	Monted to LST-thi to furnish power for		
	tio1sting anchor.	യ പംസം	
1205	Onderway to assigned anchurage.	1048	Orderway from Plains to Point Nav Sci
1223	Anchored in berch Lib. Bikink.		shos ARCE.
1528	Underway to alongside interi ship 200		
	(ST 52 to essibl in heisting 114 anthor.	4 201y	
1835	Fled up alongside LaT 12 port to port.	0.27	On seation at Point Wan.
1141	Basso supplying power to _97 52.	1590	Assumed seation astron of USG Saids:
1155	Undersway from alongatics LDT 52.		GME 1171.
16.4	Anchared in perth 146 (n. 30) kind Lagons	- 32;	An-Traced in Neceb 285, ALAIN).
141-			
26 August		2 July	
2651	Underway to lurnish power and ald in	2042	Anchored in Decili 22.
20.74	substing and st of 191 52.		Allerhoused in Decimination
0907-2020		Char 24652 /	75 (.). (875)
0407-2020	Noored to 1.87 52 to fu:Alsh power for	Same Second	25 July, 0075)
	holssing anchor.		
1329	Underway from ST-52.	74 July	
1052	Moored to USS Bellan (AN 79)-	2015	bedacesy from Michael Atoli in Accordance
1000	Guderway to go alonguide target whip the		wirtekter op Plan i 40.
	Raigh Tailot (DD-390) to take \$1 \$r. tow.		
1677	Moored to Talbox to take it in yow.	25 July	
(432	Opderway find issuint with fallot in row	OSOB	Commenced a latiting counterclocketter uning
	for Rwejaletr.		89 bett mader in accordance with in-
			structions contained in COTE 1 Up Plan
21 28 August	En route to KMejalein.		J 46.
-	-	0635	Observed underwater explosion of simple
29 Nogust			bomb in Eikini Lagoon.
0LOI	Nachward Tajbot	0843	Seconted from Point Nam.
EC #0	Proceeding to UTL Kevies (AD 19: so take		
	on fuel.	26 July	
1:55	Append to starbusto side of another	(4)0	Anchores to berth A. Biking Accil.
16.2	Underway to assigned anchorage.	1.57.0	Addition of a little to be added a second
1474	Noored by berch 24 of Kwajaleju.	Collowing Di	FER many complement landed many Deck
	NOOL NO SHI DWILKI 24 DWILKWA (D.WSHI.	LOTTOMIN' DA	KER, many scapilanes landed near Orca.
10		29 July	
10 Rogunt 15 B		0045	Anthropol an Anthropol Printers
	Operated in Residiein performing contine		Apphysic is pertury, diking,
	booy laying ducies. Not involved with		
	target wernels during this period.	10 JL17	
		QR49	Anchosed in beckh 22.
6 September			
1969	Underway for Gume.	i August	
		1805	Ancho:ed 16 berth 364.
T 12 September	14		
_	En route Resjacein to Summa	1 August	
		0806	Anchored in besth 22.
<ol> <li>3 September:</li> </ol>	RICTURG SE COMM.	5735	Shifted fuel to post for purpose of
•			ecraping weterline.
		(117	anchored to perio 364.
	USS DACA (AVP.49)		
		4 August	
Crew State: 2	15	0406	Anythogeneting internets 22.
	Arnhugh: 3 May 1946	1031	Anchored in berth 364.
	Departure 12 August 1946	1000	CONTRACTO ALL DELLAS 2971
	ation: 22 met (41 km) 4	S. Kalender	
Shot BELO -	ation: 22 m (4) ta)	5 August 0805	Aschored in berth 22.
	on (o(alten) - Pear? Narbor	<b>}6</b> 37	Anchored to bench 364.
	l'eardrue: 18 December 1946		
LINA. C.EMLAN	te. 13 Gecember 1946	6 August	Augher die erste Br
		¢751	Anchored to perch 72-
Task Long and		1646	Anchored to berth 364
	is seeplane tender orca served in TG 1.6		
	Mic Group) as a terminal for the weapleme -	1 Append	
	Serveen Ebeye and Mikint Islands. Micea	0154	Acchored in perth 22-
Was elso	prepared to provide air-sea rescue in an		
and the second	g. It provided submitted and tacather set	12 Loopert	
vire to	r VHB-32. A one-man serological unit was	Č449	Underway from Birini to Restalain.

#### USS OTFAME (AKA 104)

Eren Shze. 67 Bakini Aloli Acuiva: 20 March 1946 Ethini Atoli Departure. 2 August 1946 Shot Agui Lorgetum: 35 cml (64 cm) INL Shot BAKIR :0:4100: 25 cml (46 km) ISF Decontamination Location: Pearl Harbor Operational Cleatance: 13 September 1946 Final Clearance: 13 September 1946

- Task Unit and Lunction Dilaway, an attack cargo ship, was a member of 70 1.3.1 (Transport Unir), Others and USS Substite (Add 99) were loaded with 200 Scabers and construction material at Suct Pueneze before satisfy for Eikink, Ar Bikini, they served as barracks and material stores whips for the Seathers.
- Stat April (7 July, 0900)
- 50 June
- 1749 Underway in accordance with CJTE & Cp Plan 1 46 for operation area Marmon.
- t Juiv 807 Anchored in beach 336. Bikind.
- Z Joiy 1954
  - Recoord to be; th 35, Miking.
- Shel SMXIR [25 Jely, N935]
- 24 July 1640 Underway from Bikind Accol in accordance. with care 1 up stien 1 46.
- 25 July 1740 All Nored by best 32. Scoup beg Alcili.

28 Ju39

- 0952 Underway for Bittini Acolt. 1838 Anchored in borch 159, Billint, 1837 Underway from Bakini to Rongelap.
- 29 July 0671 Approved to perth 02, Kongelap Atoli-
- 30 July
- 1753 Underway for Robini.
- IL JUDY C707 Anchored in berrin 35. Aiking.
- 2 Junest Underway Cross Blicsof to york hughway. 1603 Call Exchie.

#### <u>1985 PACHTRA (188571)-3)</u>

Crew \$124. 299 Ølsini Atoll Arrival – By 1 June 1946 Biskni Atoll Opparture, – 5 September 1946 Shot Alui Location: 28 mil (52 km) 15F Shot BAKIR Location: 12 mil (72 km) 5E Secondamination tesetion. San Francisco Operational Clearance, 2y 77 Noverter 1946 iinet Clearance: 9y 4 January 1947

fack Unit end Function Palmyga, a setvage ceaft reader, was the flagship. of the E.2.7 (Salvage Unges, the outles of this

unit included selection beaching action. Sacilirating colored of design abips, performing all andoreater work involving divers both before and afree the tests, budy placement. Fireflighting, and general sativage work. As a floating valvage pase. Paleyra carried assorred salvage equipment and housed salvean personnel.

Shal ASIE (1 July, USOO)

30 June

1500 Joined formation. Look aboard personnel engaged in Inst-Elizate work off lanchebl and Buss.

1 Junity

- OB2B. In preparation for the flash from atomic bono ABLE, all hands revealed their eyes to prevent b)induese
- 2905 Explosions were observed in Hikini La good, tares were evadent in shiget yessels.
- 1207 Received dispatch trop CTB 1.2.7 to remain in teentry area Able.
- Ordered to send a post to transfer board-1026 ing teas from USS Athometic (ATF 148) to USS Reclainer (ADS-42) (Reference & p. VII-L B-MAL
- 1321 acchored in booth Able, althout,
- one officer with a 2-bar working party 1425 Best the ship in boat #4 with two burning out [116 [16 out whether chains) [a: Lorgel vesse2 Y0-160.
- Soat M6 sent to Seclaimer for assignment 1435
- to boarding twan by proter of the b.2.1. Noet the left the ship to propert boat 1530 pool noorings.

1540 Sout 45 certities.

- 1646 Was requested to move (CT+142D 100 yards) (9) merets) offshore to prevent beaching Reference 6, p. VII 5 16-A). 1800 Boat ## recurned.
- Noa: 46 cetyspen). 2039
- 2 Ju3y
  - i326. some by body to exclude the beginning tanget. subvarian USS State (SS-305) no Ereu laione. 1430
  - LCH #2 left to assist beaching Skate. 1600
    - Individual sent to Register for examina-tion efter being expanded to radiological contamination.
  - 16:05 1420 87 calucied to the shap. 1650 10W WI returned to the ship.
  - 1655
  - Individual such to mechainer for examination was recorned to the ship and dw clared normal to all respects

 July ណែទ Shifted to setth 1412.

Egimute had no further contact with target vessels un-CL2 BAKER.

Shot BAR!# (25 July, 0815)

24 2519

- 1245 Redistogical conitor came shoard. 1249
  - Inderway Sant Rikins in accordance with CT8 1.2 Op Order 1-46.

25 JULY 1100

Anthored in Bikint Lagoon.

## <u>USS Palmyra</u> (ARS[T]-3) 25 July

# USS Panamint (AGC-13)

1200	Distanced to have two boats rade ready	2 August	
6400	with cutring equipment and to report to	1250	LON an Assessment where DR assessment durameters
	Rechainers Lot Sost: uttlane (Reference 6.	16.0	<ul> <li>LCM #2 departed which 32 cases of dynamics for bigsting on Rest intervi.</li> </ul>
	p. VII 7 5 10. One cutiling Dual (LCPR)	(095	LCM N) departed with a solvage party.
	was returned to Pajmyra before entering	1520	Nooted in botch Q.
	the target stray.	1630	200 kB and Salvage party returned.
1255		:850	Moored 500 yards (651 apteru) south of
	An officer with a 5-man working paray	.000	horrh 360.
-34	left the ship for the thiger eles.		Ampira Jeo.
400	Mosking party relarmed to ship		
		3 Jacquer	• · · · · · • · · · · · · · · · ·
76 July	· · · · · · · · · · · · · · · · · · ·	0332	Accounted in anchorage M.
0852	Freemater tark and intake tosted for		
	radioactivary and found to be clear.	13 Nugrat	
1632	Directed to aland clear shall Reclaimer	C940	Radiatio Rection representative come
	papared correctly anchorage area with catego		aboard for temporary duty.
	whip (55 Mughes 400-412)	A	
18)1	Atchored at berch 344, Bikani	20 Acquas	
		0855	Taiget Vessel Clich-sis booted is star
27 July			(sperd
1012	Directed to send an LCM to pick up an		
	obstruction buoy and replans by on C-1/2	21 August	
	fathom (8.2-meter) shoal off north who	0615	LCC(L) 635 underway.
	of Energ (Reference 6, g. VIC-E 21-8).		
1908	Pasedted to send an UCH to beaching stea	27 NG QUST	
	to assist in beaching target ship 050	1400	Sank radioactive spring body by citie
	Fallen (APA-8): (Peferonce 6, p. V1) [		fire.
	73-B).		
1420	Dispected to name at COM plant anchors for	10 Nugarit	
	Failon (Seterence t. p. VII 1-74 R).	0920	18341)-611 came allongside.
		: 155	LCIRLE-615 andveway.
28 Doly			
ંાંબ	Official to have two LANS ready to any of	Soplemary	
	in herching target submatine USS Dentade	1815	Underway to Kwajakein.
	(55-135) (Reference 6, p. 911-1 30-8).		
1435	LCH #2 Left ship.	<ol> <li>September</li> </ol>	Artived at keajareit.
1440	ILTE #3 jagt shap.		
lold	Anctored 659 yerds (411 meters) south of	September	
1010	beith 382.	453	Radsafe Radiological Cimarance Board ce-
1739	LCTR WE contractored.		purtog aligate station of conditioned examination
1830	LCF #2 returnet,		
1021	THE AT LEADINGS		of only and personnel.
10 1lv			
29 July	Transat to pass hear rate a particul of		155 PRAME NO. 1867-171
29 July 3755	Siperted to nove boat take a series of a dilate stand willow and importe that		USS PANAPINE LAGE-131
	sound) any any and the line and the sound a line	frank fran	
2755	sound) bits endund beins, and <u>tentude</u> (Met energy 5, p. VII ( 35 B).		591
	Royad)ags enverté <u>pellos</u> , and <u>tenteude</u> (Mef Frience 6, p. VII E 36 B). Digented to piece obstruction buoy in	SINICT ALS':	598 Areteal 29 June 1946
2755	Roundlogs environd <u>selics</u> , and <u>tentuch</u> (Me) mience 6, p. VII E 36 B). Diperced to place obstruction buoy in ence of scheve larget whip VSS Separage	SIKINT ALS': E1LIN" ALQTI	596 Arrival 29 June 1946 Departure 27 July 1946
2755	Roundlogs environ <u>selics</u> and <u>tentude</u> (Met mience 6, p. VII E 36 B). Diperced to place obstruction buoy in ence of schewi tacyet whip VSS Seyetoga (CV-31 to mark mast and elterend of	Sikiri Ala': Eikin' Alaii Shat AB(S Va	590 Arriyal 29 June 1946 Degarluce 22 July 1946 cáltan 28 nml j21 voi RHÍ
2755 0935	soundings enound <u>selic</u> , and <u>tenende</u> (Met enence 5, p. VII E 35 B). Directed no pizze obstruction buoy in ence of scheve target whip USS Sectors (CV-3) to mark mast end element of island (Meterenve 5, p. VII E-38 B).	Sikiri Ala': Bikin' Alaii Shat AB:S (a Shat SUKEP y	596 Arrival 29 June 1946 Degarlure 22 July 1946 Saltan 28 mml 123 yml Mif Scaltan 28 mml 123 yml Mif
2755	Roundlings envired <u>selics</u> and <u>tenence</u> (Met energy 5, p. Vii C 35 B). Diperted no pizze obstruction buoy in ence of scheve darget whip USS Sectors (CV-3) to mark mast and elegened of (Kland (Mediumbuy 6, p. Vii C-38 B). Directed to have an USP properted and at	SIRIFI ALD': BIRIN' ALDII SPOT ABIS LO Shot SUKEP Q Decontembridg	596 Arvival VƏ june 1946 Departure 20 July 1946 cation 20 mml (20 km; BUD pogtion: 9 mml (10 km; ESt Ton to;ation: Los Angeles
2755 0935	Roundlings envirod yeallow and <u>tenencia</u> (Met energy 5, p. VII E 36 B). Diperted no piece obstruction buoy in ence of sourch larget whip VSS Sectors (CV-3) to mark mass and elterend of island (Meterence 6, p. VII E-38 B). Directed to have an UDE prepared and at high side to saving starn of <u>Dencyfa</u> theat	Sikiri Ala': Bikin' Alali Srot AB:S to Shal SAKEP a Deconteminan Operationa	598 Arvival 20 June 1996 Departure 22 July 1946 cation 18 nml (23 cml Ref poglion: 9 nml (22 cml Ref Solution: 9 nml (24 mm) 551 Jon Lojation: Los Angeles L'eardres, 27 Nuvember 1946
0935 (3)77	Roundlings envirod yeallow and <u>tenencia</u> (Met energy 5, p. VII E 36 B). Diperted no piece obstruction buoy in ence of surryin larget whip USS Sectorga (CV-3) to mark mass and elterend of island (Meterency 6, p. VII 1-38 B). Directed to have an UDP prepared and at high tide to saving storm of Dengyia clear of Meghees (Reference 6, p. VII 1-39-B).	Sikiri Ala': Bikin' Alali Srot AB:S to Shal SAKEP a Deconteminan Operationa	596 Arvival VƏ june 1946 Departure 20 July 1946 cation 20 mml (20 km; BUD pogtion: 9 mml (10 km; ESt Ton to;ation: Los Angeles
2755 0935	soundings around <u>selic</u> and <u>teneode</u> (Met erence 5, p. VII E 36 B). Directed no pizze obstruction buoy in area of source target ship USS Sectors (CV-3) to mark mast and alterend of island (Meterence 5, p. VII 1-38 B). Directed to have an UDM property and at high tide to save an UDM property and at high tide to save an UDM property are the classes (Xeterence 6, p. VII 1-39 B). Some Revense perconned when directed to	Sikiri Ala': Eikin' Alaii Shot KB:S (o Shot SKKEP q Decontembrat Operationa' Final Creare	598 Arrival Və June 1946 Deparluce 20 July 1946 salion 28 nml (23 km; RH) ocalion: 9 nml (17 km) (31 Ion Lojation: Los Angeles L'eardroet 27 Nuvember 1946 nce 3g 27 November 1946
0935 (3)77	sound)ags around <u>selic</u> , and <u>teneode</u> (Met erence 6, p. VII E 36 B). Directed to pizze obstruction buoy in area of schern larget whip USS Sectoga (CV-31 to mark mast and alterend of intend (Mediatory 6, p. VII E-38 B). Directed to have an UDA property and at high tide to sating stern of <u>Dency/a</u> clear of Hughes (Reference 6, p. VII E-39 B). Some Palmyte personnel were directed to report to USS Mendas (ANGS 2) with an	Sikiri Ata': Bikin' Atali Shot KB(S to Shot SAKEP e Deconteminat Operationa Final Crears Task on't ar	598 Arrival 29 June 1946 Departure 22 July 1946 Sation 18 mml (23 sm: MMF Scatton: 9 mml (12 km) (31 Jon Loiat <sup>a</sup> nn: Los Angeles L'eardrie. 27 Nuvember 1946 Since Sy 22 Movember 1946 Since Sy 22 Movember 1946
0935 (3)77	soundings around <u>selic</u> and <u>teneode</u> (Met erence 6, p. VII E 36 B). Directed to place obstruction buoy in area of schern larget whip USS Sectors (CV-3) to mark mast and alterend of island (Meterenzy 6, p. VII E-38 B). Directed to have an USP property and at high tide to satist stern of <u>Dencysia</u> clear of Hogies (Reference 6, p. VII E-39 B). Come Palmyte personed were directed to report to USS Mender (ANSS 2) with an aroutings of planting submatime meeting	Sikiri Atali Bikiri Atali Shot Ketsiya Shot SAKEP y Deconteminan Operationa Final Cleara Task on't ar Ponnyin	598 Arrival 29 June 1946 Departure 22 July 1946 Sation 18 nml (23 sml REF Scation: 9 nml (12 km) (31 Jon Lojat"nr: Los Angeles L'earante. 27 November 1946 Since Sg 22 Movember 1946 G <sup>4</sup> uhtthah K. an amphibious torde Dackhip, was a mem
0935 (3)77	sound)ags around <u>selic</u> , and <u>teneode</u> (Met erence 6, p. VII E 36 B). Directed to pizze obstruction buoy in area of schern larget whip USS Sectoga (CV-31 to mark mast and alterend of intend (Mediatory 6, p. VII E-38 B). Directed to have an UDA property and at high tide to sating stern of <u>Dency/a</u> clear of Hughes (Reference 6, p. VII E-39 B). Some Palmyte personnel were directed to report to USS Mendas (ANGS 2) with an	Steint Algit Bikint Algit Shot KB(S Lo Shot SAKEP & Deconteminat Uperationat Final Crears Task Unit Ar P <u>onamin</u> Dec OC	598 Arrival 29 June 1946 Departure 22 July 1946 Scatton 38 nml (23 cm; REF Scatton: 9 nml (12 km) (51 Jon Lotathor: Los Angeles L'earante. 27 Nuvember 1946 Ince 39 22 Movember 1946 d'Autothan Ince 39 22 Movember 1946 d'Autothan Inc. an amphibious torde Diagship, was a bem Tú ( 3.3 Hobsecvors Cote) P <u>anamane</u> caraged
3755 0935 (327 1:25	soundings around <u>selic</u> and <u>teneode</u> (Met erence 6, p. VII E 36 B). Directed to place obstruction buoy in area of schern larget whip USS Sectors (CV-3) to mark mast and alterend of island (Meterenzy 6, p. VII E-38 B). Directed to have an USP property and at high tide to satist stern of <u>Dencysia</u> clear of Hogies (Reference 6, p. VII E-39 B). Come Palmyte personed were directed to report to USS Mender (ANSS 2) with an aroutings on planting submatime meeting	Sikiri Atali Shak Atali Shak Akis ta Shai Sikip a Deprationa Tinal Cieana Task on't ar P <u>onagin</u> Der of alword	598 Arrival 23 June 1946 Departure 23 July 1946 ration 18 nml (23 rml RMF prathon: 9 nml (12 km) (51 Jon Loiation: Los Angeles L'eardree. 27 Nuvember 1946 rice 3, 27 Nuvember 1946 d'Aunctian <u>r</u> u (13.3 Hoppervorm Chird P <u>onamine</u> cargies of United Sations representatives, civia-
2755 0935 ())7 ()25 ()25 ()25	Roundlings around <u>selic</u> , and <u>teneode</u> (Met erence 6, p. VII E 36 B). Elgensed no piece obstruction buoy in anes of source (acuet ship USS Sectorga (VV-3) to mark mast and alterend of island (Metereney 6, p. VII 1-30 B). Cirected to have an UCH prepared and at high side to sating starn of <u>Dencyfa</u> clear of Hughes (Xefereney 6, p. VII 1-30 B). Some <u>Paleyta</u> personnel were discreted to report to <u>UCS Mender</u> (ANGS 2) with an accustions on planting submatime meaning buoy.	Sikiri Atari Etkin' Atari Shot KB(S to Shot SKKP q Decontembring Operational Tinal Cleara Task un't ar Ponngin Days of alward San act	598 Arrival 20 June 1946 Departure 20 July 1946 station 28 nml (23 vml RHF orgition: 9 nml (12 km) (51 Joh Lojathon: Los Angeles L'eardree. 27 Nuvember 1946 d function tree 3g 22 Movember 1946 d function To ( 3.3 Hobsetwirs Units) Panamane cargies of Johand Sectors Stationes cargies of Johand Sectors Sectors Ilves, club- entistic Congressional representatives, and
3755 0935 1327 1325 30 July 0920	<ul> <li>Sound Jogs and the jost of the second /li></ul>	Sikiri Atali Etkin' Atali Shot KB(S to Shot SKKEP q Decontembrat Operational Final Crears Task on't as Panamin Det of alward San act Special	598 Arrival 20 June 1946 Departure 20 July 1946 cation 18 mml (21 cm; KH) oration: 9 mml (12 km) (51 Jon 10:44°nr: 105 Angelen timerance. 27 November 1946 d function tree 3g 22 Movember 1946 d function To (13.3) Departure Coits Ponamine carties of United Sations representatives, and Dross representatives. Because of the
2755 0935 ())7 ()25 ()25 ()25	<ul> <li>Kourdings around ywills, and <u>immuda</u> (Meterine 6, p. VII E 36 B).</li> <li>Directed to pizze obstruction buoy in anew of scarve larget whip USS Sectors (CV-31 to mark mast and alterend of intered (Meterinev 6, p. VII E-38 B).</li> <li>Directed to have an UDE property and at high tide to satisfy stern of <u>Dency/a</u> clear of regimes (Reference 6, p. VII E-39 B).</li> <li>Some Palmyte personnel were directed to report to USS Mender (Abd 2) with an around buoy.</li> <li>LCH N2 beit Palmyte.</li> <li>LCH N2 beit Palmyte.</li> </ul>	Sikiri Atari Etkin' Atari Shot KB(Sito Shot SKKEP Q Decontembrat Operational Final Crears Net on Las Penamin Dec of abosed San act San act San act	598 Arrival 29 June 1946 Departure 22 July 1946 cation 18 nml (23 cm; Ref ocation: 9 nml (12 km) (51 lon Lotation: Los Angeles l'earance. 27 Nuvember 1946 d function transmithious torce flagship, was a mem To ( 3.3 Régeneration field of Junce Sations representatives, civil- entists. Congressional representatives, and prose representatives. Because of the observers. Celouiso: transmitters and re-
3755 0935 1327 1325 30 July 0920	<ul> <li>Kourdings around ywills, and <u>immuda</u> (Meterent to piece obstruction busy in ane of Schevil Larget whip USS Sectors (CV-3) to mark mast and alterend of filesed (Meterent 6, p. VI) [-38 B). Streeted to take an USP property and at high tide to satisfy stern of <u>Dency/a</u> clear of Hughes (Meterent 6, p. VI) [-39 B). Some Palaying personnal were directed to report to USS Mendes (ANSS 2) with an around to District and the meaning submatime meaning busy.</li> <li>LCM N2 beit Palaying.</li> <li>LCM N2 beit Palaying.</li> <li>LCM N2 beit Palaying.</li> </ul>	Simiri Atari Bikiri Atari Shat KBiš Lo Shat SAKEP q Decontemina Sinal Creara Task un't ar P <u>pravin</u> Dur Ol Bivord San act Biretse Creivecs	598 Arrival 29 June 1946 Departure 23 July 1946 cation 18 nml (23 cm; REF populson: 9 nml (12 km) (31 lon Lojat"on: Los Angeles l'earance. 27 Nuvember 1946 C function to an amphibious torbe Dackhip, was a mem TO ( 3.3 Objectors Unit) P <u>onamine</u> carging 10 July 3.4 Objectors Unit) P <u>onamine</u> carging 10 July 4.5 Congressional representatives. civil- entists. Congressional representatives, and provers. tellowision transmitters and re- were placed aboard the ship. It also had
3755 0935 1327 1325 30 July 0920	<ul> <li>Kourdings arrand yalis, and twentucks (Meterence 6, p. VII E 36 B).</li> <li>Directed to pizze obstruction busy in area of scheren darget whip USS Sectors (CV-31 to mark mast and alterend of Kland (Meterence 6, p. VII E-38 B).</li> <li>Directed to take an USP prophetic and at high tide to sating stars of Dencysia clear of Hugewa (Meterence 6, p. VII E-39 B).</li> <li>Some Palayian personal with directed to report to USS Nender (AHGE 2) with an arcuitions on planting submattire meaning basy.</li> <li>LOM N2 beft Palayis.</li> <li>LOM N2 beft Palayis.</li> <li>LOM N2 beft Palayis.</li> <li>LOM N2 beft Palayis.</li> </ul>	Simiri Atari Bikiri Atari Shat KBiš Lo Shat SAKEP q Decontemina Sinal Creara Task un't ar P <u>pravin</u> Dur Ol Bivord San act Biretse Creivecs	598 Arrival 29 June 1946 Departure 22 July 1946 sation 18 nml (23 sm; REF osation: 9 nml (12 km) (51 lon 10:48*nr: Los Angeles l'earance. 27 Nuvember 1946 d function transmithious torce flagship, was a mem TG ( 3.3 Régeneration field of Junited Bations representatives, civil- entists Congressional representatives, and prose tepresentatives, and re- doservers, television transmitters and re-
2755 1935 1,25 1,25 1,25 20 20 20 20 20 20 20 20 20 20 20 20 20	<ul> <li>Sound Jogs allowed Swillow and Immedia (Meterine 6. p. VII E 36 BS).</li> <li>Dijerted no pjæte obstruction buoy in ane of sourch target ship VSS Sectors (CV-3) to mark mast and alterend of island (Meterinev 6. p. VII E-38 B).</li> <li>Directed to have an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties and at high side to save an UCH properties (NESS 2) with an arcustices on planting submatime meaning body.</li> <li>LOM N2 befs Pajeyrs.</li> </ul>	Simiri Atali Etkin' Atali Shot AB(Si Go Shot SAKEP q Decontembran Operational Final Cierra Task Un't ar Ponnyin Dur of Bluest San act San act San act San act San act San act	598 Arrival 20 June 1946 Departure 20 July 1946 station 18 nml (21 wst Ref orgition: 9 nml (12 km) (51 Joh Lojation: Los Angeles L'eardree. 27 Nuvember 1946 d function trial 27 November 1946 d function To (13.3) Objectors Corte Electhic, was a bem To Jobse Corgressional representatives, and Dross representatives. Because of the objectores, television transmitters and re- were placed aboard the ship. It also had representative Constraints
3755 0935 1,25 30 July 0920 1200 1448	<ul> <li>Sound Jogs and the jost of the second state of the se</li></ul>	Simiri Atali Etkin' Atali Shot AB(Si Go Shot SAKEP q Decontembran Operational Final Cierra Task Un't ar Ponnyin Dur of Bluest San act San act San act San act San act San act	598 Arrival 29 June 1946 Departure 23 July 1946 cation 18 nml (23 cm; REF populson: 9 nml (12 km) (31 lon Lojat"on: Los Angeles l'earance. 27 Nuvember 1946 C function to an amphibious torbe Dackhip, was a mem TO ( 3.3 Objectors Unit) P <u>onamine</u> carging 10 July 3.4 Objectors Unit) P <u>onamine</u> carging 10 July 4.5 Congressional representatives. civil- entists. Congressional representatives, and provers. tellowision transmitters and re- were placed aboard the ship. It also had
2755 1935 1,25 1,25 1,25 20 20 20 20 20 20 20 20 20 20 20 20 20	<ul> <li>Sound Jogs and the Jos and Lenzoda (Meterine 6, p. VII E 36 B).</li> <li>Different to place obstruction buoy in anea of source (length black black) and alterend of sland (Meterine 6, p. VII E 38 B).</li> <li>Directed to have an UDM property and at high side to save an UDM property and at high side to save an UDM property discrete to report to UC5 Mender (AKGS 2) with an attention of the scored to report to UC5 Mender (AKGS 2) with an arcoring buoy.</li> <li>LCM M2 beit Pajagis.</li> <li>LCM M2 beits and stones and to the bits.</li> <li>Stones is.</li> </ul>	Sixiri Alat: Eikin' Alati Shot KB:S to Shoi SiKEP Q Decontembrat Operational Final Crears Task on'L as Panagin Det of Sim act Sixes of Febreas Special press of release of the Adla ()	598 Arrival 20 June 1946 Departure 20 July 1946 station 18 nml (21 wst Ref orgition: 9 nml (12 km) (51 Joh Lojation: Los Angeles L'eardree. 27 Nuvember 1946 d function trial 27 November 1946 d function To (13.3) Objectors Corte Electhic, was a bem To Jobse Corgressional representatives, and Dross representatives. Because of the objectores, television transmitters and re- were placed aboard the ship. It also had representative Constraints
3755 0935 (2)77 1:25 30 July 0920 1200 (448 (520	<ul> <li>Sound Jogs and the jost of the second state of the se</li></ul>	Sikiri Atali Shar Akali Shar Akali Shar Akali Shar Akali Dependentai Shar Adli Shar Adli 29 June	598 Arrival 29 June 1946 Departure 23 July 1946 salian 18 nml (23 sml REF scalian 18 nml (23 sml REF scalian: 9 nml (12 km) (31 lan Loist*nr: Los Angeles l'earance. 27 Nuvember 1946 d'uncthan is, an amphibious torbe Elegably, was a mem TO ( 3.3 Objectors Units) P <u>anamine</u> cargies of United Bathoma representatives, civil- entists. Congressional representatives, and bross representatives. Because of the objectors, television transmitters and re- were placed aboard the ship. It also had replaced aboard the ship. It also had replayment for unflectivity densarrements. 1417, 5900)
3755 0935 1,25 30 July 0920 1200 1448	<ul> <li>Sound Jogs and the Jos and Lenzoda (Meterine 6, p. VII E 36 B).</li> <li>Different to place obstruction buoy in anea of source (length black black) and alterend of sland (Meterine 6, p. VII E 38 B).</li> <li>Directed to have an UDM property and at high side to save an UDM property and at high side to save an UDM property discrete to report to UC5 Mender (AKGS 2) with an attention of the scored to report to UC5 Mender (AKGS 2) with an arcoring buoy.</li> <li>LCM M2 beit Pajagis.</li> <li>LCM M2 beits and stones and to the bits.</li> <li>Stones is.</li> </ul>	Sixiri 4131 Sixiri 4131 Sixi Algii Sixi Algii Sixi SiXEP 4 Decontentional Sinal Cleara Tesk on Lar P <u>pinagin</u> Decod Sixiri Sixi Agla (C 29 June 0919	598 Arrival 29 June 1946 Departure 23 July 1946 scatton 18 nml (23 est REF scatton: 9 nml (12 km) (31 lon Loiat*or: Los Angeles l'earance. 27 November 1946 d function to an amphibious torce Departure, was a mem TO ( 3.3 Objectors Unit) Panamine cargies 30 July 4 Sattons representatives. civil- entists. Congressional representatives. and biose representatives. Because of the Sternets. Endevision tradeliters and re- were placed aboard the ship. It also had replayment for reflectivity densarrements. 14 (y. 5900) Accived at Sikins.
2755 0935 7201 1:25 1:25 0920 1200 1200 1200 2010 2010 2010	<ul> <li>Sound Jogs and the Jos and Lenzola (Meterine 6, p. VII E 36 B).</li> <li>Diperted to place obstruction buoy in anea of Schwin Larget ship USS Sectors (CV-31 to mark mast and alterend of slaced (Meterine 6, p. VII E-38 B).</li> <li>Directed to Nave an DDM Dispeted and at high side to satisf stern of Dency/a clear of Hughes (Meterine 6, p. VII E-39 B).</li> <li>Some Palayte personnel were directed to report to USS Mender (Weberthy 6, p. VII E-39 B).</li> <li>Some Palayte personnel were directed to report to USS Mender (Add 2) with an arcustice on planting submatime meeting body.</li> <li>LCH N2 beit Palayte.</li> <li>LCH N2 tetuned: crew was contaminated by radius tively and ordered to change and methic clothes and some push of the Schweits.</li> <li>Anclosed in both XINE.</li> <li>Dispetied in UCDM with a dynamicing party to Capillard target Webbet DCT 119.</li> </ul>	Sikiri Atali Shar Akali Shar Akali Shar Akali Shar Akali Dependentai Shar Adli Shar Adli 29 June	<pre>598 Arrival 20 June 1946 Departure 20 July 1946 cation 10 mml (21 wet Ref orgiton: 9 mml (12 wet Ref orgiton: 9 mml (12 wet Ref orgiton: 9 mml (12 wet Ref it rearder. 27 Nuvember 1946 d function title: an amphibious torbe flegship, was a mem titl 3.3 Hopservire Units Paramagne cargies of United Sations representatives, and bross representatives, Becaupe of the observers, television transmitters and ref were placed aboard the ship. It also had regigment for inflectivity densativements. is'y, 5900) Arrived of Sitens. Nonparticipating observers pearded and</pre>
3755 0935 (2)77 1:25 30 July 0920 1200 (448 (520	<ul> <li>Sound Jogs and the Jos and Lenzola (Meterine 6, p. VII E 36 B).</li> <li>Diperted to place obstruction buoy in anea of Schwin Larget ship USS Sectors (CV-31 to mark mast and alterend of slaced (Meterine 6, p. VII E-38 B).</li> <li>Directed to Nave an DDM Dispeted and at high side to satisf stern of Dency/a clear of Hughes (Meterine 6, p. VII E-39 B).</li> <li>Some Palayte personnel were directed to report to USS Mender (Weberthy 6, p. VII E-39 B).</li> <li>Some Palayte personnel were directed to report to USS Mender (Add 2) with an arcustice on planting submatime meeting body.</li> <li>LCH N2 beit Palayte.</li> <li>LCH N2 tetuned: crew was contaminated by radius tively and ordered to change and methic clothes and some push of the Schweits.</li> <li>Anclosed in both XINE.</li> <li>Dispetied in UCDM with a dynamicing party to Capillard target Webbet DCT 119.</li> </ul>	Sixiri 4131 Sixiri 4131 Sixi Algii Sixi Algii Sixi SiXEP 4 Decontentional Sinal Cleara Tesk on Lar P <u>pinagin</u> Decod Sixiri Sixi Agla (C 29 June 0919	598 Arrival 29 June 1946 Departure 23 July 1946 scatton 18 nml (23 est Ref scatton: 9 nml (12 km) (31 lon Loiat*or: Los Angeles l'earance. 27 November 1946 d function to an amphibious torce Elephip, was a new TO ( 3.3 Observors Unit) Panamine cargies 30 July 4 Sattons representatives. civil- entists. Congressional representatives. and biose representatives. Because of the stere placed aboard the ship. It also had replayment for reflectivity densities (ary, 5900) Accived of Sikins.
2755 0935 7201 1:25 1:25 0920 1200 1200 1200 2010 2010 2010	<ul> <li>Sound Jogs and the Jos and Lenzola (Meterine 6, p. VII E 36 B).</li> <li>Diperted to place obstruction buoy in anea of Schwin Larget ship USS Sectors (CV-31 to mark mast and alterend of slaced (Meterine 6, p. VII E-38 B).</li> <li>Directed to Nave an DDM Dispeted and at high side to satisf stern of Dency/a clear of Hughes (Meterine 6, p. VII E-39 B).</li> <li>Some Palayte personnel were directed to report to USS Mender (Weberthy 6, p. VII E-39 B).</li> <li>Some Palayte personnel were directed to report to USS Mender (Add 2) with an arcustice on planting submatime meeting body.</li> <li>LCH N2 beit Palayte.</li> <li>LCH N2 tetuned: crew was contaminated by radius tively and ordered to change and methic clothes and some push of the Schweits.</li> <li>Anclosed in both XINE.</li> <li>Dispetied in UCDM with a dynamicing party to Capillard target Webbet DCT 119.</li> </ul>	Sixiri 4131 Sixiri 4131 Sixi Algii Sixi Algii Sixi SiXEP 4 Decontentional Sinal Cleara Tesk on Lar P <u>pinagin</u> Decod Sixiri Sixi Agla (C 29 June 0919	<pre>598 Arrival 20 June 1946 Departure 20 July 1946 cation 18 mml (21 we) Ref oration: 9 mml (12 we) Est lon Lotethnr: Los Angeles Liberatrice. 27 Nuvember 1946 d function full 3.3 Hopsetwire Units Panaging cartiers of United Sations representatives, and Dross representatives. Because of the objections the influence of the ship. It also had requipment for influctivity densignments. ising, 5900) Arrived of Sitens. Nonparticipating observers peared and </pre>
3755 0935 (007 1:25 30 July 0920 1200 1200 1200 1200 2010 2010 2010	<ul> <li>Sound Jogs and the Jos and Lenzoda (Meterine 6, p. VII E 36 B).</li> <li>Dipersed no pizze obstruction buoy in ane of source target whip USS Sectors (CV-31 to mark mast and alterend of stand (Meterine 6, p. VII E-38 B).</li> <li>Directed to have an UDR property and at high tide to save an UDR property areas at an high tide to save an UDR property directed to report to the sectors 6, p. VII E-39 B).</li> <li>Directed to have an UDR property and at high tide to save an UDR property directed to report to the sectors 6, p. VII E-39 B).</li> <li>Dow Paleyta perconnel with directed to report to UDS_Mender (AkG2 2) with an arcustices on planting submatime meaning basy.</li> <li>LOM N2 beits Paleyta.</li> <li>Superious in CDN with a dynamicing party to Capillard target wester LCT blig.</li> <li>LOPM and dynamicing party retained.</li> </ul>	Simiri Alai: Bibiri Alai Shot AB:Silo Shot BAKEP Q Decontentiona Sinal Cleara Task un't ar P <u>provi</u> Duc of abused San act Sink Aita (: 29 June 0939 0.7.	<ul> <li>598</li> <li>Arrival 20 June 1946</li> <li>Departure 20 July 1946</li> <li>cation 18 mml (21 wet Ref orgition: 9 mml (12 km) (51 lon 10(48*nr: 105 Angeles timerates. 27 November 1946</li> <li>6 Aunothan Is, an amphibious torbe Electric, was a mem of 3.3 (Opperators Chits) Paramone carties of United Sations representatives, and bross representatives. Because of the objections, television transmitters and re- sere placed aboard the ship. It also had replaced aboard the ship.</li> </ul>
3755 0935 (007 1:25 30 July 0920 1200 1200 1200 1200 2010 2010 2010	<ul> <li>Sound has a normal second second (Net energy 6, p. VII E 36 B).</li> <li>Dipersed to place obstruction buoy in ane of source darget obstruction buoy in ane of source darget whith USS Second (V-31 to mark mast and alterend of sland (Mefermov 6, p. VII E-38 B).</li> <li>Directed to have an UDM property and at high tide to save an UDM property factor of the encoded to be subjected and at high tide to save an UDM property factor of the source /li></ul>	Sixiri Alai: Sixiri Alai Shot AB:Si Lo Shot BAKEP Q Decontentional Final Cierra Task Unit Lor P <u>prompto</u> Dur of abused San acs Sixe Ciel press of relives upwint Shot ABLA (1) 29 June 09 Jy µ.T.	<ul> <li>598</li> <li>Arrival 20 June 1946</li> <li>Departure 20 July 1946</li> <li>cation 18 mml (21 wet Ref orgition: 9 mml (12 km) (51 lon 10(48*nr: 105 Angeles timerates. 27 November 1946</li> <li>6 Aunothan Is, an amphibious torbe Electric, was a mem of 3.3 (Opperators Chits) Paramone carties of United Sations representatives, and bross representatives. Because of the objections, television transmitters and re- sere placed aboard the ship. It also had replaced aboard the ship.</li> </ul>
3755 0935 (2)77 1:25 30 July 0920 1200 1200 2010 2020 2020 2020 2020	<ul> <li>Sound Jogs and the Jos and Lenzoda (Meterine 6, p. VII E 36 B).</li> <li>Different to place obstruction buoy in anea of source (arget whip USS Sectors (CV-3) to mark mast and alterend of sland (Meterine 6, p. VII E-30 B).</li> <li>Directed to have an UDP property and at high side to satisfy stern of Dency/a clear of Hughes (Reference 6, p. VII E-30 B).</li> <li>Come Palmyte personnel were directed to report to USS Mender (Ardet 1, p. VII E-30 B).</li> <li>Come Palmyte personnel were directed to report to USS Mender (Ardet 2) with the structions on planting submatime meaning body.</li> <li>LOM N2 beit Palmyte.</li> <li>LOM N2 beith Additional scheme must be to the structure in the structure for the structure for the second so the structure is and stones and the structure is beith Alter.</li> <li>Directed in UDPM with a dynamicing party to Caption thing party returned.</li> <li>LOM N1 with 14 per left to head Hughest storm of Dency.</li> </ul>	Simiri Alai: Bibiri Alai Shot AB:Silo Shot BAKEP Q Decontentiona Sinal Cleara Task un't ar P <u>provi</u> Duc of abused San act Sink Aita (: 29 June 0939 0.7.	<ul> <li>598</li> <li>Arrival 20 June 1946</li> <li>Departure 20 July 1946</li> <li>station 18 mml (21 wst Ref orgition: 9 mml (12 km) (51 lon 10(48*nr: 105 Angeles timerates. 27 November 1946</li> <li>S Autothan Is, an amphibious torbe flegship, was a mem of 3.3 (Opperators Chip) Paramyne carties of United Sations representatives, and bross representatives. Because of the objections, television transmitters and re- sere placed aboard the ship. It also had replaced aboard the ship.</li> </ul>

- 1 July 1541 Anthored in booth 250, Colenvers (som <u>Pongajon</u> inspected the entire ratget area in Smolit tools and while permittee to board target ships Negata, USS Arkansas (RB-233, and Genean coulset Pairs <u>Fugua</u> (RB-234, and Company)
- 2-July 095¢ Underwary. 1040 Torget ship Japanese cruiser Sakawa Sighied cinAing ⊃y the Ateta. Li45 Anthored Sa berrh 20.
- 5 July 1 100

IGO Less Biting Atols.

- yigt 3
  - 0955 Aschered of Resjolein. 1950 Began the Partice create that had been promoved to scrupy the interfer period between ABLE and BAKER (Reference 6, p. 01) 0-01.
- Shot BARES (25 July, 8835)
- 24 JULY
  - 2145 Salled from Rwejslein.
- 25 July Parageist retained to the Bikin: ered (e. fore the BAKES deLongtion).
  - 1735 Anchored in berth 382. Rikini Lagoon. Iust imite Score Channel. Redicactivity in the Mater around the target array preversed <u>Generalize</u> from going into the La grow for inspection. The observers were attorned to examine a ranget ship. USS Nggres IDD 6100. Deathed on Energy Island to provent it from staking. The observers viewed Magnes & close range from stat. Usaget Reference 6. p. V35-0-101.
- 27 July 1820 Left BSXIN for Avaiateir (Reference 6.
  - p. V11-2-101.

#### USS PARCHE (SS-DBA)

Crew Size. 61 Bikin's Atol's Arrival. 22 May 1946 Bikin's Atol's Cenartons: 22 August 1946 (rew Location for Shot ABLE: USS Bottineau 1424 225) Crew Location for Shot ABLE: USS Bottineau Shot ABLE Sucation. 1,366 yards (1.3 km) 550 Shot AAKER Location: 1,360 yards (1.4 km) 550 Decontation Location. San Arancheco Screeped 302, 1970

Last Unit and Function the submarine <u>patrne</u> was a gender of TU 2.2.4 (Submarine Unit) Submarine Division 1/7, serving as a hargen vessel. Its creat map evacuated before each shot. The Electronics Scoup had installed equipment for electronic experiments abound it. The group monitored its separate pieves of redicand rates equipment aboard the boat.

Shat ABLE (1 July, MACA)

2 July -

- 0935 Party expected Settler const (Reference 6. p. MET-1-8-26).
- 1355 Tracs & and B reposeded.

Table N 7 Number of own deconteminating <u>USS Parthe</u> (SS-336) between h and 21 August and their length of time eboard

\_\_\_\_\_

Gale	în Board	Oeparted	Ngaliya et cen
			•
t August	1,200	1500	17
1 August	0900	1165	:5
• • • •	1700	1300	
8 August	<b>П900</b>	1100	20
9 August	090C	M00	50
	1360	1600	20
10 August	DR JO	1100	30
1) Bugest	0900	1200	9
12 August	0838	1160	20
12 Auguse	1300	1536	20
13 August	08JC	1130	20
13 August	1360	1536	20
14 August	9810	1102	30
14 August	1060	1530	20
15 August	0900	MCO I	
15 August	1400	180C	
16 August	C830	1530	40
11 August	C830	1520	40
18 August	0900	1500	26
19 August	0900	1730	
29 Auguse	0980	I BQG	
AU AUSUSE	1669	0100	
71 August	Daco	1500	

- Rote: -- Indicates for value given."
- Scorge, Reference 1, Parche.

Table & B. Topsade shipboard (ontahinattur (R/M hours) aboard USS Parche (\$5-384).

Quet e	₿ow.	Anidihipi	Sterre	Aver age
· - <b>-</b>	- · ·			
Ji July				5.2
August				5.9
2 August				4.1
1 Lugurt				3.5
6 Acquist	0.8	3.5	Ð.0	1.64
7 Acquir	0.0	3.0	0.35	5.86
8 1.00021	Q I	2.5	а 3	0.71
9 August	0.1	5.0	0.2	0.40
10 Asgust	u.2	1.6	0.2	0.60
12 46 2051	07	о н	0.2	0.40
I acast	0.12	3.6	0.2	0.21
In Ausualt	0.7	0.57	0.1	0.372
17 August	0.05	0.5	0.65	0,211
IS ALGUEL	0.08	0.5	5.0	0.735
20 August				92

Note:

<sup>a</sup>Below derbs reported sadiologically safe when opened 6 August except for the combog tower (0.3 9/24 hours) and meth induction pipe (2.0 (8/24 hours).

. . . . . . . . . . . . . . . . . . . .

Source. Reference 4.

## <u>USS Parche</u> (SS-384)

2210 (NLO - Opening up beat.

2.24 July Coeveraboard .

Shor BAKIR (25 Luky, 0835)

26 July -

1660 USS Preserves (Mdd:-8) was directed to proceed to the virtuality of ranger nummethane (2)5 Spate (05-20%) and Batthe to make a radiological survey around live submerged summarized (Weservere S. p. Vir 2 14 201).

6.8 August Parkbo schubbet down using bojier compound. The boat was cinared alternately by Republing Wath Supject suggrand and applying a lyminath.

- BiANGLER 0985 COMMIT FROM A CONTINUES FOR GRUP 085 M120000 (A20103) 0935 Another Availability (A20103)
- Reguet 14 Sime definered a sample of the edge fert to USS Maves (AH 127 for study by the Packete Office.
- 14 .8 August: Parific sciubled down with lye and its table pump hower is down during high presskie.
- 19 1030-001
  - 2044 Accepted to percentl2
  - 1/10 Anking of next betth 14%
  - During the day, the ship was again loadd down  ${\rm Galfu}_{1,0}$  agot removed any task.
- 20 August Come cloped up wood on bridge deck and leaved it down thetermore Art.

12.6 stress of the estating parties assisted: time: absaude Basche Iros & August to 21 August whe summarized in-Table A.F. Shippoach summarized aboard Parche is reported in Table 4.8

- 22 August - 2745 - Pasche sebuarded wind, estire tree. - 1988 - Wederway to manjateix.
- 23 August .101 - Attitud at Kwajalain. .430 - Crow transferred to Fisiance
- 24 A sport Crew represent for a number of
- 75 August Grew seboerded for 6 hours.
- 25 August ..... Grow returned to the elevel
- 28 August Departed for San Francisco Via Pearl Parbox.

#### USS PLENSIL MANLA (88-38)

Crew Stac. 484 Atbiev Aloti Aschweb - 26 29 May 1946 Atbiev Aloti Departure. 21 August 1946 Crew Jolation for Shot Abil: - USS George <u>Clamer</u> Likek 221, USS Porgingh<u>a</u>e LaPA 223) USS Pennsylvania (88-38)

Crew Location for Shot BAKER - (Tymer; Rozabradge Shot Afte Location: 1.144 yand: ().4 km; St Shot Baked Location: 1.144 yands (1.0 xm; S

Sunk 10 February 1948 year Evalatein

Task until and Fanceton

- The bactleship <u>Ferngylvenia</u> served in TU 1.2.1 HastFlowhip and Grutver Bratt. Rettleship Division 5. As a target ship for CREENARD to the crew left the ship for each shot. Different block of mate tials were placed abact the ship for experimental reasons. The bacegials included food and minimized automation and radio. Eader and Minimized equipment.
- 5AC\* ABL: (1 301y, 0400)

Hand  $P_{\underline{m},\underline{n},\underline{n}}|_{\underline{n}}$  is commutatively were executed to  $\bigcup_{j\in I} y_{\underline{n}} \in X_{\underline{n}}$  and Eq.(b) using the formula of  $X_{\underline{n}}$  and  $X_{\underline{n}}$  and  $X_{\underline{n}}$ 

ودده ۱ پرښت د

э.

კიეყ	
6335	the last ensure executions group left for
	Rockbridge Leaving to persone obcard-
:314	Papiesions animship noted (Metarence 6.
1114	p. V(:-!-8-A).
: 110	A Life Liered up on Peonsylversa and
	barned centiousanly until about 1510 when
	at was contropalished by the OSB salvace
	Decties.
:443	
- 44 -	Pennsylvania was reported Celger sour
	dautermore 6. p. VII ( 1) NO.
1522	Padiological trains in boats 914 and 8)
	reported Pennay Vania Griges owner (Rof-
	econce 6, D. Vit 2-11a A).
1102	Crow consolidates on Clymer.
1196	JSB_ Casterny IMPS 221 Reported Represe-
	vanke Gelger wover (keturence C. p. VII-
	2 (5 A).
:505	of declared <u>Peopsylvania</u> clear for
	breading by Teams & and B: to be boarded
	on the initation of Gay.
July	
1013	The commanding officer and a porcion of
	Boarding Test & departed Lose Civres for
	USS Haven (AH 12) to pick up the fadio-
	logical sunter .
.130	The radio logical Monistric was taken about
• 5 2 4	
	the boat and the party headed for Pervi-
	<u>mylyan</u> ta.
1155	the ship's initial coarding read immedi-
	atery commences a radiological cleasance
	of the repairt.
1025	the topolidy and the laterasy and sain
	mast were found to be radiologically
	clear, and the inspection was continued
	ter ter ter be.
1404	The casepates largered enclosures to file
	guns from and main and second decks were
	found to be called optimility allege.
\$415	The engine rooms. Effe rooms, and auxili-

- 1415 The engine rooms, thre rooms and south lary spaces were found to be radiologically clear.
- 1435 The readinger of Team & and Team B was received aboard.
- 1455 The ratiological offices and comparing officer satisfied themsolves that <u>Pengsylvania</u> was ratiologically clear and sate.
- 1501 The radiological monitor collected water samples and returned to Haven.
- 2305 Clearance to turn on freshwoter was cocalment

5 Duly 1730 - Dell'Escred tes rest 0530 atravalt.

6 Saly 1926 3440 Conducted Atving operations to check the underweter conductor of the Ship.

- 25 July 0357 The Jast-Riggle evacuation group was evacuated to <u>Rock</u>buildge.
  - 1408 CJTF L told DSM to avoid Per<u>mavivani</u>a as eadowactivaty on boald wax shaty with high intensity (Reference 6, p. Villet JI-AD.
- 27 Joby 1030 <u>Parany</u>ikanta cleated to: the instial boarding teas. 1980 <u>Perroyukanta</u> Josi-Sincia creasesers
  - aboard Rock<u>bridge</u> were transferred to Clymer. 1008 OSS Sectainers (ARS 42) pasted Pennsyl.
  - vanja, which had a 25-minute tolerance.
- 28 July Evensylvenia was reprinted to be Abightly down by the stern with a slight starboard list.
- 31 July 3400 The after section of Penn<u>eylwanja</u> was washed down with faaster by satuage vest sets.

3 August

- (R93) SSS <u>O</u>ctives (AR5-23) separated having complanted covering Method (Verlag) a With Score (Reference 6, p. VI2-T-56 R).
- 5 August pelawin was instructed to work down roppsystemize thatoughly using night pressure streams and sitemwinds take Weiger tradings trad 50 seet (25 meters) of work side (Reference 6, p. v13 (R-17).

8 Αυσιει

- N430 The lists secondy/wents counding team, along with the radiological bottlock from <u>seven</u>, commenced a preliminary inspection. The radiological survey showed a 45 bitute to 2-hour tolerance on the weather decks weige: unadings are presented in Table N.9 Purping and radiological in Contamination was cartled on until 1000, at which time the ship was closed up and the postding team totwined to ylymps.
- 9 August One5-t630 Heardboxy team eacked on rediglogical de contambration and pumping of the alter compartments. Canvas. marile. and cark floats were regorned from the topolde, and the starboard side of the quarterfect was accubed in decontambration efforts. The boarding issue relation to <u>Cyster</u>.

DB Nuquist DB40

The busching team coorden versio<u>vivent</u>e and commented solvers and decontariustion

#### Puble A 9. Server resounds aboard USS Pennsylwania (89-36) by ship's company the first day of recoarding (8 August 1946).

Loca:10n	Range -		Location of Pailun 
Stàrboard. Maim dech ait	20.40	30 D	Waterline. scupters
Part, main deck àil	2.0 - 4 0	Þ5 O	Plane
Port, starboard vide of forecastle	15.30	18 0	Scupper Imater- ways) generally Mad Pot spots
Superstfullure deck	20.40		regetable locker, water errunwlated
Mann make	1.5		
farement	\$11ghtly >1.5		

Source. Reference 3.

\_\_\_\_

\_ \_ .

work: Continued Gadowiazination work on the weather decks with assistance from working parties from tacget ships USS independence (CVL 221, USS Persocoia (CA 24), Less magneté (LG-169), and <u>(225 Hajph</u> <u>Takh</u>ot (DD-1907).

\_\_ . .\_

- bi august all decontentration work on <u>Pennsyl</u>wan<u>ta</u> was beined,
- 14 August Hadiological monifors cented were who had been on Pennsylvania.
- 20 August The are in the ide such on Perinsylvania was found radiotoghratly unsafe. The same returned to centried target ship (SS) letagers (AvX-87), where Puppsylvania per songet had been fromsfeared for Derining and messing.
- 17 21 August metring parties boarded pernsylvania to inspect and prepare it for iowing.
- 21 August 1400 (Yewi<u>sy)</u>vania underway (ritow by US2) (<u>ri</u>ow an<u>or</u> (ATY-100) for Reajstein Topside average 0.3 K/24 hours (Keterone 7).
- 20 August 3100 Perceysvania assived at Kwatalain.
- 79 August Decomplissioned at Kwsjalein.
- 20 September Topshie average 0.39 R/24 hours (Reterence 1).

<u>Yerkowy</u>tyani<u>a</u> underness radiological and structural studies until 35 Expressy 1946, when it was work.

<sup>5464 6</sup>AKER [74 July, 0835]

- Crew Size 344 Bakhni Ato'' Ar-Iwal, 20.29 May 1946 Biblin' Atobi Departure, 24 August 1946 Crew Location for Shol ABLE - <u>USE George L'ymmen</u> (APA-221, 155 Rocklington (APA-224, 155 Rocklington (APA-224) Crew Location for Shol BAKER: <u>Clymer</u>, Rocklington
- Shot Adif Location. 710 yards 1949 meterni [ Shot datif Location: 640 yards (585 meterni m Decontamination Locathons, Kwajalein, Sromerica Sana 10 Movember 1948, off the Locat of admirgton
- Fish Lohs and Function The Neavy cruiser Pensaining served to TC 5.2.1 (Barnteship and Cruiser Unit). Cruimer Division 2) In was a target versel for CROSORADS. Its crew was evacuated before each sint. Fund and clothing, Andro. Endat. And electronic equipment were placed aboard the veccel for experimental resons.
- SMAL ABLE (1 3)16, 0900;
- i July
  - CitC Completed evaluation of Persanoia to <u>Reckinghos</u>. Last-boouse security detail evaluated to Cigners.
     Loco Cigners and Rockinghas, reenseted the la
  - 1630 Clymer and Portanghas, reensered the la good and proceeded to englor for the right, haven in the might, <u>Perhasols</u> persental ebeard Clymer disembatked and joined <u>Perhasol</u>s crew about Packinghum. 1932 Fire noted batching or familial (Reference 6 p. VII-5-d-A).
- 2 July -
  - 1530 Nultough Hunsa<u>rola</u> had not yet been cleased sadialogically, the commanding officer made a survey of <u>gensocola</u> from a small boat but fid not board.
- glab, (
  - 0800 <u>Persacola</u> cleared caddologically. 0935 the commanding officer. Teac A. and cad-
  - sate ponteor come shourd. D925 Cotto Chiefs of Staff and members of the president's Statustion Roard, who bud powrded prior to the companding officer. Left the ship.
- (340 1200 Conducted redictory)(a. Inspections of the topside structures. Topside was cleared (addotog)(a)ly with come exceptions.
- 1300 1701 Team B of board to upen below feelt spaces and continue with radiologics; survey below. <u>Persecole</u> decised reducedies clear with minor exceptions. A security watch of 3 officers and 23 eclipted mys. reveloed aboard.
- 1720-1430 Task force sedical officer on board for inspection.
- 1-10 July No Pensocola creverabers regularly berthed abrard. Due continued living on Rockinghym. The tree worked on Pensecola from 3 to 10 July and returned to Pock ingham each might except for a small meturity detell.
- 1349 shifted by Logs to serih 266.
- 31 July Crew recursed to guarters aboard. 3035 Another in Desth 361.

Shot RAKER 425 July, 08254

- 25 July Crew abound Receingham.
  - 0345 Lost-minute personnel left stip for Clymet.
    - The detonation caused extensive damage to Densecols and it was radiologically unwale for habitation.
- 27 July <u>Persson</u>ia per-weakbels abound <u>Corner</u> apparently transferred to Reckingham.
- 30 July ATM 67 westerd down <u>Second</u>rife for 4 hours with high-pressure bases (Reference 1, p. VEL J 49-3). The ship had colorates of 6 and 5 pinctes
- 31 July ATR 61 washed down Permacologie with ideation (Reference 5, p. V(1-1-57-8)).
- I kugusi Wirk parties from Persecula beacded (58) Preserver (APS 6) to go atomyside Pensa cola.
  - 1620 Reserver washed down decks and superstructures with stationer to reduce high radioactivity after a boarding party four-Pepparola found it unsefe. DD-1622 Repair lease aboard to jay out notes and
  - LOOD-LE22 Repair teams about to jey out notes and prosp out thosed compariments. Repair remms left Ponyacola and the <u>Pennacola</u> bounding party related to Rockingham. Redicactivity was too high to pethis an arturate appearance of damage.
- August .
  - 0830 Repair parries boarded 0<u>95 Reclassed</u> (ARS-07).
  - .007 Repair parties emesded Persacols and completed laying out house and connected potsable pimp in preparation for pumping our finaded compatients.
  - 1025 <u>Periatoria</u> due to beavy rutinactivity, which prevented at from centinity.
  - 1415-1528 Sectionary alongetin <u>Perspecta</u> to complete connecting pump and house. High caddoactivity prevented rehearding entept for short periods of size.
  - 1605-1810 <u>Serjager</u> moornd elongside to sefuel page-
- 5 August 1430 Rectainer wern alongside Pensecole. Perboarding groups boerded Pensecole to ad just homes and to continue preliminary damage inspection.
- ? August |420-|540 RebsetCing patty (run Herjiation; edjusted hoses
- R August 1510 1610 :Sectainer stongeide <u>Penys</u>col<u>s</u> with reboarding party to adjust hoses.
- 10 August 10 Julii A smoll boarding party from <u>Recigination</u> came aboard to adjust pump boses and inspect damage. In eccordance with advice from radiological monitor, from men were sent to <u>uts house</u> (NH-12) for exemination because their hards had been contaminated while working on <u>Reca</u>colm.

#### <u>USS Pensacola</u> (CA-24) 10 August

#### to August

1 900

duty. 2. 24 August High radioactivity cantinued to prevent permeridany of the ship except for shore periods of the DE AUQUES é830 Redsologsses came obsect Pockingnam in check all Penuscols personnel who had been on board Pensarola. Assolts were satistactory. Pensacola combnued to be where for habitation. 17. 19 August About 200 Pansacrata commembers were transferred to Clyner. Operations were started to pump all the warer our of the ship and responsibly 19 Access plum up the leases. 22 AUGULE Topside every 1.0 R/24 hours (Refer-#+C# 7) Ste mon were transferred to Properver [or 24 August comporary additional duty in connection with towing and enchoting (westerals. A small party robustical Pensacula to pre-pare it for towing. 0830 Taken in Low to Kwajalein: commembers 0.000 departed aboard Revisioningham. 26 August Arrived at K-statein: the 6 nam towing detail seturned to Rockingham from Pre-KULVER theorem is a summary. 25 Accessed Topside average 0 # 8424 hours revier \$ Octobes

The men were examined and recurred to

Pennacula was Lewed to Puget Sound Knival Shipyard by U3<u>5 Hitchili</u> (ATV 101) and USS Takelma (ATV 213) for rediclogical research on 21 April 1941

PLRRT, MEMMAN & , Yes USS NEWMAN K. PERRT 400 BR31

#### PGN 23

Crew Stat: 35 Status Acol: Arrival. 5 May 1946 Bikin' Acol: Organizer 75 August 1946 Skol Adt: Lucation 20 cml [37 cm] [46 Skol BARIA Lucation. 8 mm] [15 km] S Organizmination Location - Pedil Harbor Organizmination Location - Pedil Harbor Organizmination Location - Pedil Harbor

ence #2.

- Rute Unit and function PGR (2), a petrol potor gendoal. Was a member of TU 2.8.) (Dispatch deat and Heat Pool (hit). It was assigned to perform tageon radiological patroly. These were cooligited in the first feer days following each test. The ship then performed boat pool Guiles.
- Shal #995 (\* July, 0900)
- 10 June A radiate party reported aboard to par technology in the operation. Evaluated possionnel from front and Nac before anthoring off Access (slend)

d Duky Č245 Underway after evanuarion pairty from Access reported apparet. Rendezvoused with POH 26, POH 25, POH 29, 0650 CON-31, and PON-32. 1130 peceived clearance into degoon from radsafe wetting, comparced making oceanodiaphis and cadimitogical survey of sector Brazii with cadimingical pairol peaks (LCPL & J. & Z. A.3. JNS B 19) evacuation party from Assemi departed. 1715 1851 Anchored in berch 01, Wikin1, 2 July 0108 1452 Conducted radiological and commongraphin Stat VANS. arichosed in partin 40. 1452 3 3659 0651 exdermay the accordance with satury plan of CITY I by Plan I 46. Anchored at Bikini. 2201 1.345 Little Feldy . Proced alongside 055 Autoon (DD 77.). 1016 1911 Anchored in berch 21. < July ່ວ່າຫ Shifted archosage, bearings Seacon 'R 112-5°T Beacon 'C' 76°7 Blacon 'E' 112-5°T 33-5°T 5 2029 Wideway from encluring, proceeding to 6951 make radiological surveys of Sukoj. Jokonejsyo, SAB, Avaon, Jobij, Odoje. and Londil's Islands. 2658 Anchored to be the 3M NO CONTACT WITH LATORE VESSELS. S 20 Goly SHOL BEERE (25 JULY, OB)5: 24 Jule 0950 Radialogical section party aboard, com Denses operation of RAXER D J. Prefeation of Limit Island completed. 2235 Cademeny to strop setsmographic and move 1605 neasurement buoys.

25 July 0508 Everyation party from Access island obcess

- Obl2 Departed for area Franklin as assigned Sr. CuTF J Op Plan I 46.
- F309 Brieted the Lagoon to await LOFE A L. A 2. A-3. and B-L9 of Lagoon safety patrol. Underway conducting cadialogical percentaissance of Jagoon perimeter in morth of surface 20to (arctot Arcentina) Aschored in berth 25t. Biblioni.

26 July

- 0/43 Underway, proceeding to mane sadielogical reconnectsance of Layoon in eccordance with CJTP L Op Plan J-46.
- (55) all monitors and one-energies/hers departed. 1/02 Anchored 300 yards (540 peters) from tem
  - porary berth Roper.

27 3639

- Odi4 Descreded to carry out rediological survey.
- 1158 And hoved off USS appling (APA 581.

# P6M-23 27 July

2230 2815	Radsafe section occessed all commembers accept 5 men, to depart ship. Armaining caree last ship for Appling. A	16 August 1497	Removed a sect placed aboard by the sad- vate department.
28 July 2015 (025	nee continue reported aboutd. Des officers consider as societon crea. Four aero reported abound as sholelon crea.	19 August 1350-1841 1320	Statographed Largen ships. Anchared 400 yards (356 weiers) north of Gwyth 30.
010) 001]	terme. Ten men repozied aboast. All estamonistik protest () men god sill. Keif evensettet to A <u>s</u> til <u>le</u>	20 August 1032 1946 2111 2248	poleyway as proragraphiy assignment Stalejad on patho: assigneet.
25 Cuiy 0700 0907	Crow returned (row <u>depling</u> , Kadiological monitors about, proceeding	21 August 2206 2346	or perci assignment
5638 10 - 10 - 10 -	on radiological entropy of layour. Anchored in temperary besth 1. Rivini.	27 Xugust 1300-1310	Radsein rithter removed radiological gent.
)0 July 0651-3020 (428	Conducted radiologital survey. Anchosed in Detth 144.	2047+2219 23 August 2217 2345	On paters) thes ghost forget assay. Parrolled target area.
33 2019 0022 1132 1132	Careled out radio.odical parts). Anchored 40 yards (37 meters) east of	24 NG4051 2045 2147	Palzolised target erray.
1400	beren 2568. Shaffed fo bereh 198.	25 August 124	Underway to: Twataleter
) Nagara (4:3	Anchored 400 yards (300 meters) northealt	20 August	Anthored in Resident.
L 349	of Deelt 14. Sheked anchologo, bearings Bealca: C. 19897, Ameron W. 81-597, Bealon B. 26.597.	28 Neguest (15 1243	Checked and environment radiologically note by Padaate Section. Hadsate recommended another creck for radioactivity be Esse
7 MLGON; 1039	Proceeding on dependence for rul operade the lageon		If the ship were drydoghed of taly; bar chinery everpain(ed.
6324	Anchored 1.670 yards (1.5 kg) from bernt. D10.	taupust 0665	inderway to carry out patrol of sarges
1406	Proceeding on decontration trip out side the lagoon. Anchored in besth 304.	2721	ship dree. Anchored to Weglatein Lagoon in Reist 20.
1672	Shifted anchorage to berch 161.	30 August C813	Indexwy to take th fuel and where.
) איקאיא ( 1010	Underway for deconterination (un, scene- ing so various courses and speeds isside	0847-0925 3010-3129	Roored stariosid side to USA Genera (AD- 01). Macred stargetide ( <u>ASS Kapree</u> (AD-59) ta
.;20	Lagdon. Passed togeth Motodice and proceeded or various courses to behave decontamination run nutbide lancon.	2229 2221 2149	take on [wel oil. Underway to assigned chrhofage. Anchored in berth t8 Inderway to partoi integat ship area.
2010	Anchored in Badani Legion in berth 361	7227	anchured in beran 72 King, Kwajalein,
1.1 Avryust Oğan	Representatives (row ASS Rewitte) (ASS \$) came aboard for scientific work,	31 Xugush 2019 2715	Undermay to patrol farget area. Anchores in Secth 22-King.
3947	Underway at various courses and speeds making survey of jegoon, stopping writer	1 September	
1629	1.000 to 2.000 yaith (. V to 1.6 cm) to take water samples. Anchored 300 yards (274 moreth) south- ment of herity [14.	2844 2355	Underway op nightly pastol of Carget ship area. Anchored in berth King-22.
IL 15 Magues	Southe activities.	2 Deptember 2105 1291	Maored alongside (SI-1055, Which was
(5 August 6845-1201	Towed two target LOMS west of the ranges	1253	moored alongside <u>USS Liperigons</u> (16-158). Anchored St bettt King-22. Underway to make patrol of intgel aces.
1876	accey for minister and each them. Anchored 400 yacds (165 metwork) month of	2327	Anchored in Decit: King 22-
	tærth 38.	2 September 2:40	Node preparations for getting underway.

#### PGM-23

3 September

PGH-24

2579	Security from special are detail, orders to patrol area of target weakels having been cancelled by CTU 4.8.	7 Južy 0155
4 September		(1)e
0970 1012	Noered stangistic (SS <u>TANDigtor</u> (NDA-11) - te take on water.	1143
1623	An hored to perko king-17.	
2373 1996	Anchored an built K 9. Sederway.	1145
3525	hooved to scarboard side of PGH 74.	
3-20-5	Conderway -	1240
2491	Anchored in unspecialed anchorage, Tway Jalein.	1049
h September		1430
1135	Proceeding to N.C.R., Gase	1515
7459	Received assers to proceed back to kee Jalejn,	1548
é. Kantanbur	,	1872
6 September G&10	Acchored on berth K 29. Kwajaleit.	1545
3517	maxed to postalde of FGR 24.	2004
/ September		4077
1312	Nuclosed on Derch K 35.	1 July
8 September		0906 1243
2325	Shilled unchosage in Swith K-16.	1545
1925	Skiffed enchology to subjective point in Orejaicin Lagoon.	1602
9 September	Reported for Aver Herbor.	4 July
•	•	acos
un Sebidenset	Regived as Poort Marbon An Despection . Ser calloastivity was conducted	1615
		1753
	PG# 24	1130
Eres Slag - 4		1.50
Als: e1 A(u)1	Archvel: 14 Nay 1945	t July
	Departure - 25 Kugust 1945 Aliga - 20 Nak 137 KP1 (N)	5116
	LALICA. 8 AND LAN AND 5	
	on Localitan Frant Markoz	1232
	learacte: 10 februáry 1947 ce - 13 Murch 1947	5015
		1533
late unit and		
	e patto, motor genheals was a mesher of . I state and see the first motor for	1816
M#3 41.3	3 sDispatch moat and Bear Puol Writh. [1]  gown to perfor≡ legnon redictoginet pe	6-24 July
following and the second se	Write were conducted in the first teer days $\mathfrak{g}$ cards shot. The ship then performed least	STOT BACK
pool dat	105	26 July
Shat 4817	ر 1020 ر سل	£ 100
30 Juna		
3503	Proceeding to area frankist.	
		25 July
1 JU1y 0903 6950	Proceeding to acea Caterpalian.	0001 0838
1120	At tives of lagoon entrance.	C>40
5545 1260	Proceeding to pattol sector Chile in roe	1725
	pacy with radiological patrol boats (2001- 16-6, 5-1, and 8-8.	
1530	Laying to and changing position in ac-	1245
	condance with radiological readings.	
1621	Anchosed in Sector Chile	

	Q	Vine al content to an address barrier in
		northern part of area in victority of tar
		get westeld.
	11)e	LCPL alongside to pick up water samples
		nid record sherts.
	1143	Anthored close asimin target whip 155
		Nevada (HB-26).
	1145	Underway and hold to, waiting for tugs
		to the target ship USS independence (CVI
		Z2F clear of area.
	1240	Anchored close astern to Nevada.
	1040	1201 W 12 Texts water is watering apticle equily
	1.140	
		ment from 900-14 aboard.
	1420	Undersway to western edge of Jagoos to
		False Fadining Coll Samples.
	1515	Acrived on station.
	1548	Proceeding to specified sectors, taking
		EAUpues on atroval
	1872	Achieved in lass sector near this Haven
		1NT [2].
	1545	Received a radiological group aboard from
		naven: disentarked group that was aboard.
	2004	Anchored at 102101
	~~~	New York and the full
1.341		
	0906	Wode;way percentral (adjoincy;shi paris).
	1243	Transford 201
	1545	Underway for next station to obtain water
	1345	
		eamples for centrale services.
	1602	Anchored in vicinity of Hayyn.
4 Jul		
	80.08	inderway to result radiobogical partol
		or western part of lagoon,
	1615	Monted alongside PCM 20
	1123	waterway (con PGN 23, steading to first
		station, Carrying out radiological pa
		trois.
	1130	Anchored off Haven
t dal	l yr	
	5116	testerway for Boldralt1, Hokaetokrok.
		Adiskan, Jeirte, and Lukoj Islands to
		conduct radiological tracts.
	1232	Azotowed at Boldsmout Juliand, Jaying to
		amisting carliningises to clear island
	5015	Hiderway to: Scokes and Adrikan Islands.
	1533	Rentwed at passage tetween driken and
		Adrikan islands.
	i\$]b	Anchoted an vacinaty of Navers.
	1910	APCHOLES IN VICTORY 6: MOVES.
• )*	.:uly	Ferrard to southing and but him
0-7		Engaged to routine activities,
inn4		Ś July, 6835)
2101	68414 (A	3 2019, 0013)

100 Arrowd an drea Franklin, jotning PGM 25. RGM-29. and RGM-32. Fracewedod in Johnaus 16 petrol sector

25 July
QSD1 Scessifier 10 and Kranklan.
QSD1 Scessifier 10 and Kranklan.
QSD1 Proceeded to area Caterp1(tar.)
QSO0 Proceeded to Jegoon entrance.
1725 Entracel the Laguon and proceeded to a solent coster with Utarian lending party loitering in LCPL A-6
1765 Artifierd in new station acceptanies by UTA-8-6 P-1, and B & Laying to awate ing fartner orders.
1300 Enceeding to 20(kin) via safets rouge.

# PGM-24 25 July

:130	Arrived in vicinity of Bibink Jeberd:	> august	
	landing party went ashore.	1124	Anchored off Jelete Juland.
1435	Caught on rest while trying to avoid con	<b>!B10</b>	Anchosed need staven and sound strain(ey
	(eminated water		
84.52	Free of ceel under own power.	1 AU270151	
1575	Proceeding back to Shew with Landing	1000	Underway to Bosertoktek Exland.
	perty.	122C	Acclosed at Balantaktok Exclarit, laying to
1622	Anchored in vicinity of Body.		waiting for position.
1759	Anchored close to USS Hough McKanley	:628	Anchored off Haven.
	(au2-7): pade preparetions to evacuore		
	FGN because of radioactivity.	8 22 August	Entered drydock aboard Ak9 29 for repair
2259	Buscuated crew to USS Appling (APA-SA:		of strews and analys.
•••	maces for the captain and three unlisted		
	en.	12 жарына	Towed to Riking anomorago anna by USS
		in motore	Venatchee (ACF-)(8).
26 July			activity over 1101-
2000	Crew back aboard.	1.24 Jumar	Anchores, Gld hot get undersay.
0830	Underney.		sancharma, ara na, ger anaermay.
1052	on station to conduct radeate patrol	25 Jungune	TOWARD BY ATHIERS TO RWAINING IN
10.2	duty.	No militar	tread by statical (p was julidin
:725		26 August	Artived of Kwajalein.
	Anchored in vicinity of Karen: crew evec-	20. 100,010	Actived of Persident.
	wared to USB Hanrico HURLASI escupt for		
	captern and emergency steadby teat.	28. August - 2. 2	
			Drydocked for capaliss.
27 JULY			
3525	Cowe cetusked aboard.	2 Gepterber	Anchured In Anajalein.
0320	Underwey for patrol		
1648	Anchored meast Newton.	4 Septomber	weinning weisten CROSSRONDS (wegen
			6148-
28 July			
0830-1427	Proceeded on passol.	S Sectorizer	
1825	Anchored to Atchnig of Maxes.	(235	Departed for Guam.
2120	Shirted anchorage.	1955	Geowersi to return to Kwsjalsin.
29 July		6 September	Arrived Regislein
1114	Moored alonyside Keven.	-	
12%6	Anchored .	9 September	Lett for Pearl Harbor.
12%	Anchared.	9 September	Lett for Dearl Harbor.
	Anchared .	,	
12%6 10 July 0151		,	Leit for Dearl Karbor. Artived at Peatl Mitbor.
10 July	Gubernay to beauty Indawi to collect fa	,	
10 July 110	Gebermay to Jamman Injané to cullent da dipilagicaj data.	,	
10 July	Redermay to Annumo Indané to collect da dicianjani data. Arrived et Acmen Estand, put redicionical	,	Arcived at Peacl Michar.
00 July 1010 1010	Shubërnay to Jamman Injanë to kullest fa divilagica: data. Arrived et Komen Esland, put rediological putty albèré.	16 September	Arcived of Peerl Picbor. PGP-25
00 July 0151 0952 1230	Geodermay to Jamman Deland to collect fa dictionical data. Arrived at Komen Estand, put redictogical putty asterne. Proceeded to Mae Island.	to September Gren State - S	Arcivedias Peacl Picbor. PGP-25
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10 July 0151 6957 1730 1530	Chaderway to Jamman Caland to collect fa discioniscal data. Arrived at Acmen Island, put redicionical putty asternit. Proteeded to Mae Island. Laying to off Ham. Redicionistal patry returned aboard from	To September Srew Site S Bikimi Atoli Bikimi Atoli Shal ABLE joo Shal BAKES Lo	Arc1vediat Peerl Picbor. PSP-25 Arc1val biolay (346 Suparture: 10 Augus) (346 atton: 20 Ant (37 Sa) (34 atton: 20 Ant (37 Sa) (34)
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10 July 0151 0957 1730 1500 .525 .729 31 July 0935 1 August 1401 1455 1712 1945 2 August 0934 1(10-3510 1650 1755	<pre>Studenmay to Annum: Deland to collect fa dialogical data. Arrived at Acmen toland, put redialogical putly ashere. Proteeded to Name Saland. Laying to off Ham. Redialogical party cetutned aboard from war (stand. Anothered close astern of Haven. Anothered close astern of Haven. Anothered in berch (N()4A. Proteeding to antrance of logoox to flush out salewater system. Commended flushing out colourier system Phoned alongside (SS M()deat (AM-2). Anothered in vicinity of Haven. Proceeded to northwestern tolands so exect duct reducing(col party of Haven.) Arrived at Athen [Acmen?] Island. Redialogical party returned.</pre>	10 September Stein State S Biking Atoll Bigang Atoll Bigang Atoll Bigang Atoll Bigang Atoll Bigang Atoll Constantion Final Chestan Task Unit arc Prove 25, TU 1 8, West ASS Evolutions Stat A0, 3 (1) L Coly	Arclved at Peeri Pickor. PGP-25 Archval biology (966 Departure: 10 Augus) (946 atton: 20 mm (1) bm) (%) batton: 20 mm (1) bm) (%) batton: 8 mm (1) bm) (%) batton: 9 mm Griedny batton: 8 mm (1) bm) (%) batton: 8 mm (1) bm (1)
10 July 0151 0957 1730 1500 .525 .729 31 July 0935 1 August 1401 1401 1455 17:2 1945 2 August 0936 1(19-3510 1620	<pre>Studermay to Arman: Colonel to collect fo divological data. Arrived at Acmen Island, put rediclogical puty ashirit. Proteeded to Name Saland. Laying to off 46a. Rediclogical parry returned aboard from Name (stand. Anohored close astern of HoVep. Anothered in berch (N1)4A. Proteeding to entrance of logoos to flush out salewater system. Remanded flushing out collected Aystem Proteed in vicinity of Reven. Anothered in vicinity of Reven. Anohored in vicinity of Reven. Proceeded to northeestern talands so con duct radiological sorvay. On patrol. Arrived at Athen (Acmen?) Island.</pre>	<pre>Ib September {rew Size Signame Atol Bigan Atol Bigan Atol Bigan Atol Bigan Atol Bigan Atol Bigan Atol I Bigan Atol I Shot Bakes Ato Shot Bigan Atol I Shot At</pre>	Arclived at Peeri Pictor. PGP-25 Archival I is May 1966 Departure: 10 Augus: 1946 atton: 20 mml []] heb [%] totatton: 8 mml []] heb [%] totatton: 8 mm (]] heb [%] totatton: New Griedny Ke. 28 Pay 1947 I function a petral motor gunboot, was a member of 3 IDIspatch Boer and Scat Post Unit! Te legend to perfaim Jagoon radiojogical pa- using the flast fee days following each Iter which 34 eas to perfare beat pool July, 0930; Underway for area Franklin for GJTP 1 Op Vian for hylE day. Proceeding to Jagoon entrance. Brateed the tagoon and began radiojogical petrol with LEPL-N=9, R=10, and B=11
10 July 0151 0952 1230 1500 0255 025 025 025 130 025 140 140 140 140 1455 17(2 1945 2 Roquet 0934 1(19-3510 1630 1755 1953	<pre>Studenmay to Annum: Deland to collect fa dialogical data. Arrived at Acmen toland, put redialogical putly ashere. Proteeded to Name Saland. Laying to off Ham. Redialogical party cetutned aboard from war (stand. Anothered close astern of Haven. Anothered close astern of Haven. Anothered in berch (N()4A. Proteeding to antrance of logoox to flush out salewater system. Commended flushing out colourier system Phoned alongside (SS M()deat (AM-2). Anothered in vicinity of Haven. Proceeded to northwestern tolands so exect duct reducing(col party of Haven.) Arrived at Athen [Acmen?] Island. Redialogical party returned.</pre>	It September (ren Size S Bikinn Atoli Shol BAKEK Lo Deconidminall Final Clearar Task Unit arc pran-26, TJ 18, whos ass erola do shot, o duties. Shot AB, 5 (1) L Coly 0950 1830 L)00	Arclived at Peeri Pictor. PGP-25 Arrival I billy (966 Suparture: 10 Augus: 1946 Suparture: 10 Augus: 1946 I function a petrol enter gunboot, were a member of 3 (Disparch Bear and Soat Post Unit). The Landt to perform Support codiological pa- using the first fee days following each fter which 34 was to perform beat pool July, 0730; Orderway For area Franklin for GJTP 1 Op Utan (or MyLE day. Proceeding to Jagoon entrance. Briter which LEPL/000, 30(0), and 30(1) Entered radioactive area.
10 July 0151 0952 1730 1500 0525 0729 25 July 0535 1 August 1401 1401 1401 1405 1722 1945 2 August 0914 1(19-1510 1650 1755 1951 3 August	<pre>Studermay to Arman: Island to collect fa diological data. Arrived at Access Island, put rediological puty ashire. Proteeded to Name Island, put rediological puty ashire. Proteeded to Name Island. Laying to off Ham. Rediological parry returned aboard from Name (stand. Anohored close astern of Hawey. Arctioned in Derrh (N1)4A. Proteeding to entrance of logacy to flush out saltwater system. Remended fruching out calturater Aystem Proteeded to northewstern islands to ever duct rediological sorry. On patrot. Arrived at Athen (Acces) Island. Rediological parry returned. Anchored in brith 183 near Payma. </pre>	<pre>Ib September {     September     Site Site Site Site Site Site Site S</pre>	Arclived at Peeri Pictor. PGP-25 Arclived at Disky (346 Departure: 10 Augus) (346 atton: 20 mml ()/ 3m) (%) station: 20 mml ()/ 3m) (%) station: 20 mml ()/ 3m) (%) station: 20 mml ()/ 3m) (%) or (station: New Grieans (se, 28 Pag 1947) (function a petrol motor gunboot, was a member of 3 (Dispace) New Grieans (se, 28 Pag 1947) (function a petrol motor gunboot, was a member of 3 (Dispace) New Grieans (second compared to Jegon codio)ogical pa- using the first few days following each (for which 34 was to perform beat pool July, 0930) Orderway for area Franklin for GJTP 1 Op Vian (or hyle day. Proceeding to Jegon entwarke. Bristed radioactive area. Becked clear of codioactive area.
10 July 0151 0952 1230 1500 0255 025 025 025 130 025 140 140 140 140 1455 17(2 1945 2 Roquet 0934 1(19-3510 1630 1755 1953	<pre>Studermay to Arman: Colonel to collect fo divolagical data. Arrived at Acmen toland, put rediclogical puty ashire. Proteeded to Name Saland. Laying to off 46a. Rediclogical parry returned aboard from Name (stand. Anohored close astern of HoWey. Anothered in berch (NE)44. Proteeding to entrance of logoos to flush out salewater system. Namended flushing out collamited Aystem Proteed in vicinity of Howen. Anothered in vicinity of Howen. Anothered in vicinity of Howen. Proteeded to northwestern tolands so con duct radiological servey. Collaming. Arrived at Athen (Acmen?) Island. Radiological party returned. Anothered in berth 153 near Payer. Proteeding out of Lagoon to Lives sale.</pre>	<pre>It September { rew Size Signame     Shikini Atoli     Shot BAKES Lo     Decontaining     To 1 8.     weas ass     croix d     shot, a     duties. Shot AB,: (1 L Caty</pre>	Arcived at Peeri Pictor. PGP-25 Arcive3' (5 May 1946 Departure: 10 Augus) (346 atton: 20 mm (1) 7 ms) [%] Acatlon: 8 mm (1) ms) [%] Acatlon: 9 mm (1) ms] Acatlon: 9 mm (1)
10 July 0151 0957 1730 1500 .525 .729 31 July 0935 1 August 1401 1455 17:2 1945 2 August 0936 1(10-3510 1630 1755 1951 3 August 6325	<pre>Studenmay to Annum: Deland to collect fa dialogical data. Arrived at Acmen teland, put redialogical putty ashmit. Proteeded to Name Saland. Laying to off Wax. Redialogical party returned aboard from war (pland. Arothored close astern of Haven. Anchored in berch (NI)4A. Proteeding to entrance of logoox to flush out salewater system. Demonded flushing out collected system Phoned alongside (NS_M()deat (AM-2). Anchored in vicinity of Haven. Proceeded to northwestern talands to over duct radiological sorray. On pettol. Arrived at Athen (Acmen) Island. Radiological party returned. Archored in berth 15) near Haven. Proceeding out of Legnan in tauth sale mater tanks.</pre>	<pre>It September { rew Size Side in Atol Bitsing Apple in Atol Bi</pre>	Arcived at Peeri Pictor. PGP-25 Arcival biology (966 Departure: 10 Augus) (946 Arcival biology) (946 Arcival biology) (946 Attack 20 and (0) and (0) (attack 20
10 July 0151 0957 1230 1500 .525 .225 .229 31 July 0935 1 August 1401 1455 13(2) 1945 2 August 0936 1(10-3510 1650 1(10-3510 1650 1755 1953 3 August 6225 2215	<pre>Studermay to Ammuni Culoud to collect fo diviaging: data. Arrived at Acmen Estand, put rediclogical putty ashere. Proteeded to Nam Saland. Laying to off Wax. Rediclogical party ceturned aboard from war (stand. RevMored close astern of Wavey. Anchored close astern of Wavey. Anchored in berch (Wi)4A. Proteeding to entrance of logbox to flush out salewater system. Commoded flushing out culturater system Moned alongside (Stare)(dcar (AW-2). Anchored in vicinity of Hayen. Proceeded to northwestern balands to exe duct rediclogical soceny. On pettot. Arrived at Athen (Acmen?) Island. Radiological party fourned. Anchored in berth 183 near Mayon. Proceeding out of Laynon to flush sale water tanks. Stated flushing.</pre>	<pre>It September { rew Size Signame     Shikini Atoli     Shot BAKES Lo     Decontaining     To 1 8.     weas ass     croix d     shot, a     duties. Shot AB,: (1 L Caty</pre>	Arclived at Peeri Pictor. PGP-25 Archiva' (j) May (j)6 Suparture: 10 Augus; (346 atton: 20 mm) (j) Ma) (%) (atton: 20 mm) (j) Ma) (%) (atton: 8 mm) (j) Ma) (%) (atton: 8 mm) (j) Ma) (%) (atton: 8 mm) (j) May (%) (atton: 8 mm) (j) May (%) (atton: 8 mm) (j) May (%) (atton: 9 mm) (j) May (%) (j) Ma
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#### PGM-25

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1457

Archored in might station.

2221-2247 1630-1100 conducted a cup to assigned serger. 1850 Anchored in night station, fikini Aloil, 2300 2325 Underway to go alongside KOR-24. 1930 26 July 0150 2025 Anchored in victority of Haven. 2 July 01:3 1422 varched out radiological patrol. 0220 Anchored in berth 34A 0905 1120 142≥ underway to approach starting position of a new set of refsele surveys. 1615 1720 2126 1700-1663 hade radiate run. 1820 anchored in might station. 3 July 36)\$ 21 July 0550 Underway to carry out redsale patrol. 0647 1537 Laying to oll Mayen. DNDD 0937 1800 35)7 Underway on radiate parcol. 1835 Recharged at Hakins. 28 July 0105 L168 Organizations and mailines hell the 1840 ship. 1.148 1010 1239 1013 Underway on redsafe pairoj. 1516 Arkthured. 30 July 9641 5 July 2052 1431 Underway on redeate patrol. 1910 1120 1220 Ancharod at Bokentusaku Esiand. Archored as Entaro Island: rediological 31 July party surveyed Enserg and colurned. 6805 Survey party departed for lunchebi-1430 1550 chdenway to pick up cadeological party. Rediviorital perty abound 1559 1208 1010 RECEDENCE SPAT Hoyen. 1420 18)5 6 July 0810-1522 Underway on additioning teal partol. Approximate at Ballint 1550 Investi 1215 11:0 8 July 0810 1450 Underway Unicoph Lagonn with phonographic unat aboard. Z hugust Anchored in beath 144. 1504 0900 1) July 1.7161 i na an Underway with controls aboard to reat 1710 various islands of the chase by putting 1823 poritors ashare to test for radioarclydey. Acchosed in besth 144, Birlat 6839 3 AURUST 1912-1022 12-24 July Engaged in coulder activities. 1201-1803 1801 Shot BACIR (25 Buly, 0815) 5 Acquist 24 Juiy I JIU Widefway in accordance with JTF 1 evacua-1250 tion plan for BAKER day. 1930 Rerived in acus Pranklin. é August 25 July 0845-3146 0840 1548 Proceeded to laguno entrance. 1040 Entered the Lagoon and commonced enfeate parent in company with (CPI-8.9, 8.10, August and B LL, steaming on verious courses at 3840 minimum speed. 1145 Lawing to in ourse edge of sector Unite 1140 (northeast to made of surface (e:o); up able to approach area due to suffactive 1528 mater. Remained at cuter edge of patrol 1950 600102 1615 Anchored in Rikin: Lagoon. 10 August 1706-3851 Underway for highly station

Underway on cadiological paraol. Andlested off Sciences and Ethdetic tetands. Anchored in vicinity of Haven. Biting Laboon Underway to proceed to various islands. to eake rediological antices on warlow. concern and at various speeds. Anchored of[ Adrogan Island. Underway for Lete 16 land Anchored in Dersh 344. Biktmi. Underway on todsale orders to proceed to wes for high-speed decostantial los run Boat from Maver storigite to remove (a diological gear-Shifted berrhs. Anchored in borth 34M. Shifted anthoreges: enchored is viciniay of Heven. Esdemay to make decontantmetion rup at nen. Returned to tappen. Anchored in vicinity of Haven. Beet alongside to remove radiological end Dueanoglaphy yent. underway to make survey in target area. Archared in berch 162. Underway to target michniage to take ha districted realings near subton targets. Anctored nest target ship \$35 Nevada 189 и:. Underwey to anchorage. Anchored in Derth 92. 5200 Underway for Guar via Newjelein.

Shifted berghan

donieed hereby

safe .

Inchored.

rangel pres.

Anchored.

Underway to new betch by orders of Rod

Undermay to make coddate tests in Bitlat.

Received orders to everysta and 25, with

excaption of 20 men lot security watch.

Underway to make radiological survey in

because of redboartive contestination.

Evenuated intfluence and crew consumed.

Inderway to readuct safety patrol.

Anchored in vicinity of Heven.

Anchored in vicinity of Haven.

0.2 M		с.
PGM	- 4	э

13 жедька 9952	Anchored at Swajatein.	601	In Larget area cacrying our BanER day operations in sector Dermatk least sr
12 August	Underway from Avaisioin to Cosm.	3745	- Southwast of surface zerol in company while LCPC H-52, B-63, and B-LL. Hadrological and photographic parties
Li KLQ AS	Apriland an Geam.		Left ship.
•		5 <b>9</b> 00 6 6	Anchored in Decen 320, BErigh,
	PG25	2145	Whifeed anchorege.
	P04-29	2250	NUME SO ANTERSENT SALLONGELVERY ACCUMUT INTER MESTA CARTYLES OUT DAKEN SAY ACCUMUT
Free Stret	83 Arriva): 14 May 1945		Sties, all of the crew was evacuated to
	Departure: 10 August 1946		<ul> <li><u>(55, App)]org</u> (APA 58) with the exception of the captain, energy we obtinet, and</li> </ul>
	(4113) - 20 pml (37 mm) ENt		Six company a
Shoe BAREP 1.	acation 8 mel :15 en; 5		
	'sh Lodat'or: New Orleans	26 July	
Aural Cleard	nce, VB May 1943	Ch12	Great Folgenod on FOR 29.
Taxe On the an	6 [ucch]nn	123N	Jaderway to serios Malland Juess of Hur Jace znici to rske wates samples.
	is patchi motor cumbral, was a semicer of	1950-1950	Observers aleard.
	3 "Dispatch Boat and Boat Pools, it was	415	(a vightity of the permit permit).
	S to perfore Espon fodiological potiols	1529-1530	Obtervers departed.
	the first few days following wash shot	1645	Apphosed Set BLDGr F Lagoon.
afrec e	tich is way to perform Smar goal daties.	21 July	
Shot ABLE 18	2.1v 9900:	0722	Shierway in Exclor England (south to
	40-9: 07001		Anutheast of sortace recol. taking
30 20mm			samples of collabortive waters
1020	Underway to area Frankish Sci NULE day	:223	Kasered sector Asgentine incene to
	operations.		CORTANNESS OF SURFACE DEED?.
1600	Analywed ogene Angekipe.	2207 1310 1715	Toward 1996 31 14 Auctoried Seconder 92, Bikini
L July		1.1.5	Autorite at alles at Bacart
6100	Pencenting to bathor entrunce.	24 July	
2919	Laying to in area Carespillar	0652	Monitory came aboard.
1122	Entered the layons,	0175	disconing which taking demotes of collo-
1230 1800	Steaming in Telescol Lagoon, and a Englished of some the	1.5%	active water in the Lagoon technical to bibles i seems with Optil's bi-
	land, to company with radiological pation boats UPAL 8-12, 8-10, and K ve while	1 729	<ul> <li>Anchored to Stikins Lageon (1193112016), D65930180181.</li> </ul>
	testing wasks for radioactivity.	1827	Shifted to apphorage position 19930-50 N.
1922	Auchored in Strant Aro. ).		365°10130°5.
2 July 1725-1732	Parkanan and a star and had starts a	29 (56.19 071.)	Manda and have been det
102	<pre>Control p the standard (control to by the system) Anchored.</pre>	2601 1850	Moolities townord. Strawing to Sikini Legovo for cadoologi.
1.21	And orea.		cal survey work.
J Coly		1820	Montrong let ship.
0960	Two photography:5 and two regiological	(8.0	Assnoted in possition 1:032 45 M. 1659
	arn canv sboard.		JL 1201K.
6900 6905	Phatographers beit ship. Shumman sette territori ette shikebut buttu	20. 5110	
490.7	Styamong while carrying our machoarchwity - betweek	na Bety Daschipat	Underway in Biking Lagoon taking water
1240 1532	Anchored off San.		SMDIPS.
56 20	an Social to berth 40 difeant Arrill.	(516	Anchored in period 35.
4 July		l Xagasr	Provide access of
0917	Graderieway (n Alkan) Lagrawi etilo telilog Maler samples:	1710 1991 (653	Dedensey. Proceeded on decontentnetion run haside
6136	Anshored in terra 40 Bikini.	1.77 1940	Lagour.
		1641	Anchored in persh 55, Ritani,
4-24 July	Realine activities.		
		2 August	
JANU BROFF (	25 J.15, 083()	UBJO 2932-1684	Monitory boardwd. Drogaadad to take waras settion for set
24 July		2000-2006	<ul> <li>Droceeded to take wares samples for par- dictogradial suscept.</li> </ul>
1015	Redsete passy (now USS Haven (AH-12) came	1245	Anchared in Sector 584.
3	aboard for HAKEN		
1258	Proceeded out of harbor.	3 August	
: 49B	Potrallet etea franktin.	1100-1545	
21 3.4 1.4			Smatters curs Declarad in Decah (6)
25 Jelly 1935	Proceeding to also ratespillat.	2546	Anchored in bernh 361.
69:0	Leying in in area Caterpii (ar.	4 5 August	Anchored (r betth 36), Makip)
1112	Entered Lagoon.		

### PGM-29

all originography purty logicides     1063       6 Nuclet     Operating in Bikini Lagoon caking serples     5 July       1000     Mater-sampting theorem lows     1003 TM       1000     Mater-sampting theorem lows     1000 TM       1001     Mater-sampting theorem     1000 TM       11     Mater-sampting theorem     1000 TM       12     Magoon     Mater-sampting theorem     1000 TM       13     Magoon     Mater-sampting theorem     1000 TM       14     Argine     Mater-sampting theorem     1000 TM       14 <th>5 Nugust 1350</th> <th>Ocvarographic party beached and restored</th> <th>4 Jely 3925 150</th>	5 Nugust 1350	Ocvarographic party beached and restored	4 Jely 3925 150
DBSC       Operating party party to acceled       5 - July         DBSC       Streambarg ins Bikini (agoon taking sergies)       1303 110         DBSC       Materiasaphing the Direk boot       1303 110         DBSC       Operating party departed for USS Boot       1303 110         DBSC       Streambarg the Direk boot       1303 110         DBSC       Operating party departed for USS Boot       1303 110         DBSC       Streambarg the tork boot       1303 110         DBSC       Streambarg tor tork tor Streambarg tork boot       1303 110         DBSC       Defended is service of Class ska Keelsheim       1503         DBSC       Defended is service of Class ska Keelsheim       1503         DBSC       Defended is service of Class ska Keelsheim       1503         DBSC       Defended is service of the Streambarg       1100 110         DBSC       Defended is service of the Streambarg       1100 110         DBSC       Defended is service of the Streambarg       1100 110         DBSC       Defended is service of the Streambarg       1100 110         DBSC       Defended is service of the Streambarg       1100 110         DBSC       Defended is service of the Streambarg       1100 110         DBSC       Defended is service of the Streambarg			:563
DS55       Stewarding in Bitkini (agoon taking serples)       1000 The serples of water law become low:         D000       Macen-sampling Weater low low:       1000 The serples low:         D101       Macen-sampling Weater low:       1000 The serples low:         D102       Machaed is weater low:       1000 The serples low:         D005       Sciencific pacty on board to make a ta distribution       00000 The serples low:         D005       Sciencific pacty on board to make a ta distribution       00000 The serples low:         D005       Sciencific pacty on board to make a ta distribution       00000 The serples low:         D0050       Sciencific pacty on tour of Case water low:       00000 The serples low:         D0051       Arguet       Argued at seaplence.       9 May: 10000 The serples low:         D0051       Arguet       Argued at seaplence.       9 May: 10000 The serples low:       00000 The serples low:         D0051       Arguet       Arguet at an argue low:       10000 The serples low:       00000 The serples low:         D0051       Arguet       Arguet at argue low:       10000 The serples low:       10000 The serples low:         D0052       May: 10000 The serples low:       10000 The serples low:       10000 The serples low:         D0051       Arguet at argue low:       10000 The serples low:       10000 T	6 Bug vet		
<ul> <li>1000 Water-sampling declame lost</li> <li>1000 Oreanography party departed for 155 Bow (112)</li> <li>1010 Oreanography party departed for make a ta (112)</li> <li>1010 Oreanography party departed to make a ta (112)</li> <li>1010 Orderway for Guam</li> <li>1011 August Argived at swajalenc.</li> <li>1010 Orderway for Guam</li> <li>1011 August Argived at swajalenc.</li> <li>1012 August Orderway for Guam</li> <li>1013 August Argived at swajalenc.</li> <li>1014 Orderway for Guam</li> <li>1015 Orderway for Guam</li> <li>1015 Orderway for Guam</li> <li>1010 Orderway for Guama for Order (111)</li> <li>1011 Orderway for association order (111)</li> <li>1012 Argive (111) Order for Order (1110)</li> <li>1013 Argive (1110) Order for Order (1110)</li> <li>1020 Orderway for association order (1110)</li> <li>1021 Orderway for association order (1110)</li> <li>1022 Order (1110) Orderway for association order (1110)</li> <li>1023 Orderway for association order (1110)</li> <li>1024 Orderway for association order (1110)</li> <li>1024 Orderway for association order (1110)</li> <li>1020 Orderway for association order (1110)</li> <li>1020 Orderway for association order (1110)</li> <li>1020 Orderway for a</li></ul>		Scouning in Bikini Lagcon caking samples	γ[οι. ζ 31ι 6061
<ul> <li>1320 Orientography party departed for 155 Boy 1120 Antibulars 1400 Antibular 1500 Billion 1400 Antibular 1500 Billion 1500 Bil</li></ul>	10x4		
8 Nagust       1750         0065-0020       Sciencific pacey on board to make a ta diplication supervised inclose for 20       5 July 0022-165         18 Nugust       Argived at supervised inclose supervised (001)       5 July 0022-165         18 Nugust       Argived at supervised inclose supervised (001)       9 July 0020         12 Nugust       Argived at supervised (001)       9 July 0020         13 Nugust       Argived at supervised (001)       9 Magust (001)         14 Nugust       Argived at supervised (001)       9 Magust (001)         15 Nugust       Argived at supervised (001)       9 Magust (001)         16 Nugust       Argived at supervised (001)       9 Magust (001)         17 Nugust       Argived at supervised (001)       9 Magust (001)       9 Magust (001)         16 Nugust       Secondation (001)       9 Magust (001)       9 Magust (001)       9 Magust (001)         16 Nugust       Secondation (001)       9 Magust (001)       9 Magust (001)       9 Magust (002)       9 Magust (002)         17 Nugust       Secondation (001)       9 Magust (002)       9 Magust (002)       9 Magust (002)       9 Magust (002)         18 Nugust       Secondation (002)       Nugust (002)       9 Magust (002)       9 Magust (002)       9 Magust (002)         17 Nugust (002) <td< td=""><td></td><td>Oreanography party departed for USS Bow</td><td></td></td<>		Oreanography party departed for USS Bow	
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0832-1650	underway to islands at wouldn't of
	Secon in conduct radiological survey
1850	At/ Later in Serih 42
9 July	
0305	underway with selected equals about su
	clear targer aridy dies
1055	Acchered off Posserejien (Stand)
1050	Setsmologieus went astoce de subors coas
1525	telensinginis relationshipsed
1750	Anchoged (a period 25 Mikio)
11 July	
CBBC	Selignologici, name abound, proceeded to
	Nation 15 2 and -
3955-0325	Setseologias in the Nam Estand
1470 ( <b>6</b> 00	Setwoologists of Iral ( Indata)
1800	Anthoned in Letth 44
NS Guly	
4:50	Chilebooy Changel reasons and anotheregy
	a[#35
1845	Anchored in perih 64.
Sout BARER 2	5 taly, 2005)
	() ( <b>•</b> ( <b>)</b> ) (()))
24 July	
18:5	Underway to cenderatus with the LLB 3 in
	ates starging, but high highly happen
	new condition of a starting to gove
25 July	
09,1	the first to the testing on the second
1006	(Aying to at legeon entrance
	Knieced the Lagons and procheded cal-
	Glassing into target drives nector Regiand
	"Youth to southeast of surface zeros.
	Carlly water Sumpley and FadleAftSytty
	readings in company with COPL R 15, B 16,
	and R-LF.
1907	is took out of pricing pages of a bost decay
	which obtain warns dow inv high and/oactive
	costap) ration.
1547	Peercened District agoon
1501	Postancel at Miktai
1.5.45	All officers and men evenuated to USS
-	mayon the law in accessories with vernal
	Coders from today fe due to induced radion
	activity is the full and piping. Which
	occurred when PGM 3, strengted to (ind a
	secure to the method secure of the of
	- Sector of the Prinking Langes shap one - Sector of the officer and from
	- 1979 Configuration of the culture and the
	meliky move events appealed at the instance set a successful
	-0.//
26 July	
. o . u M	

GCCB Capitalin end personale, document to RCP J: and Bacto propagations to yer selectery, SOCUTION match relatived to Saves DC-1645 Underway to Lake watch samples in Tagoon, 1722 Accept.

<sup>(4).</sup> Arzhaied in beith 351.

# PGM-31 26 July

1757	Ship a company except B man skyleton prov evacuated to USS Appling (APA 58).	<pre>Sperallonal 0</pre>	or Jaratian Philippkaes Pear≩nts 10 Stister 1946 ga 10 Stister 1946
21 July			
06CC 0705	Come resurced. Underway to some Mater parples in Lorent -		l'Aurochten la privo; color gentear, was a armober of 3 (Càspatch Sean and Beet Pool (nic) i i
0700 2496	array. Geoured true taking water complex	was 695	igned to perfore lageon radiological ga-
1410 2000	Anchored off Ener Island. All tends ovacuated to Appling estops (or		uning the first fee days following each fier which is was to perform boat poul
	SEVEN MAR BOOMEDRY MATCH.	0.000	
28 July		Shat 48.7 71	isig, CROC;
1110	One officer and show why shake should be		
1005	catheve stateton come. Capteries returned abound to shift betthe due to closing in of radicattive water	ערנו אונדי 00	Underway from Wiking Atolit for Stearing atea Prancling
1134	Shifted berth.		
2455	sand and search.	: July	
24 2014		04:3 1000	Proceeding to area Categolilar Laying to in area Categolikat
C90D	officers and new solutions.	1133	Estered the layon and steamed to rectar
1345 1445	Underway has apped (LAG to reduce (Md))		Demote for the local setup survey in the party with LCP: A 4, B 5, D 16, and D 20
1605	Anchored.	1225 1410	Swept sector Grance.
		14:0-1955	Sweps sector Holland.
30 July		1820	And Workey wear 1000 Naven (101-120) in Birthia
0845-1555	Underway to take water samples within the - largeon		Lagoon .
2555	Anchored close aboard slaven	2.3619	
		1553	Three scientists reported aboard to make
1 Magy 51	hallow and the second sectors and the second sectors and the second sectors and the second se		cadio.ogacal texto.
L4CJ-(22D	Underway on Cerostantianison run outside of Blaint Lagoon to clear huli of radio-	1653 1852 1852	Codecway for tests. Actioned near buoy 1, Bikin: Lagoon.
	activity, preside extractions contrary (or best pointible decontaction effect.	) July	
:400	Anchored close eleard leven.	0400	Orederway maxing Long in D(*Ln5 Ask), tak Log waret samples.
2 August		015-1310	Loy to off Adequate 16:000.
0191-00eC	Otherway to take water samples to BDR101	10.25 (545	Lay to off Boldnotu; Island
	Lagour for ocracical aphic putposes.	141	Anchored bear H <u>aven</u> .
<b>:4</b> 30 <b>36</b> 59	Steeming on various cases in sitematic to these off catioactive contactnessed	6 July	
	boltak.	2942 1429	Districtions to western and of Biblin's Largonn
17,00	andonest close about dagen		staking periodic water samples as ordered.
		1429	Anchored in brish 34 A
3 August 	proof set of placing Lapoon, proceeding	5 July	
	for decontamination turs so reduce sadin	0920 1220	Underway among target ships in array. In
	activity on ship's betroe.		accurdance with inservetions from Buler
1653	Anchueed close aboatd Keven.		photographers.
	-	.723	Ank best etc.
4-13 August	Boutine activities.	7 July	
10 August		C#75 15.0	Touged larget area to accordance with
1)42	Underway troe Bikini Lagotr to Guan vis . Reajolatin	:610	Stairweitons from photographees. Anchewed.
		Const Abold 13	16 3.3. 00461
31 Augus) 1005	Anchored to Restatein	AUSE DAVIE 14	(\$ 33), 0835;
		24 July	
12 Logast	Undermay to Guam.	1645	Underway the area Prediction
1 August	Arelyed at Guam.	25 July	
-		C643	Remetved accors to proceed to area cator . Stitur:
	PGA . 32	29/28	girtac. Ensered area Categolilac.
		0957	Entered regions proceeded to sector
Crew Street 2			France (pouch to coutheest of sufface
ANKINI KRO!!			zero) in comany with kills a 4, 1 5,
	Ceparture 10 August 1946		R-18, and B-20 to take scientific read
	antan. 20 ant 197 kmj [41	1723	ings and data.
SPAN BROPP LO	station (2.1 mm) (13.2 km) SL	- 163	Anchered in victority of <u>Have</u> n.

## PGM-32

76 July		Shot while it	jay)" (dec)!
094 -1778 1128 2030	Collected scientific data in accordance with their Rukes of operations. Anchored in vicinity of Hawks. Evacuated personnel to USS Appling INPA	t July	Anchored to betch 21. King anthorege. Kwajnieto, at fime of detonative
	58; due la sadiaxelvaty.	2 July 0825	Underway for Dikini.
21 July 0555 0745-3615	Crew returned to PGM-31. In Target area, area to gather scientifie deta.	) July CSOD	Anchored in Secub 115, 8154n1.
1602	Anchored in vicinity of Enery Channel en- trance.	5 July Lido	Moored to target ship USS Ackenses (SS 33).
28 JUSY 1009 1640	Vederway from whichocage in vicially of Naven to new archocage due to radioactiv- Sty in this area. Anchored to vicially of <u>Appling</u> .	9 Joly 1510 1535	Undersway from Arkenses. Anchesed in Secth JPS. Bikini.
_		10 23 Zuly	Routine activities.
29 July 0806-1642	Underway within Bikint Lagoon collecting scientific data on radioattivity.	SASI BAREA (2	PS July, 0825)
)0 Joly 0747-1829	Underway from anchorage to vicipily of taiget acea to gather scientific and car	26 Jugy 1600	Loderway from besch 115 to nices Packatd En accordance with CTU (1817)
1829	dhaluqica) dara. Anchared 11 beith 34.	75 July 0855 1740	Proceeding Sodependently to Rongelap. Anthones in Douth 6, Songelap.
31 JLNY 1546 1852	Gruperway to receive freen supplies and water. Authored in bourn 52.	0/58 0/58 1700	Generation Bitter Atall Accounted in Lette 115, 20162-1.
t August		7 August	
1251 3730	conside of Highd Lagoon.	3615	Children berths
2-10 August	Routine erriviries.	3 Magune 1050	Target vessel (Clic) 614 moored alongside
1920	Left Alkant for Guae via Kwajelein.	5 Қаздақс	tor repairs aClit.)-SiS onderway from allongside.
toin	Arrived at Kesjelekn.	7 August	Shideed berths.
27 August	Departed Resjalein.	8 Nuqusi 1605	(11).5.615 bound alongoide for repairs.
17 August	Arrived at ⊂uan.	9 August 10 5	20111.3-615 samlereray from elementate.
	<u>055 PHAON</u> (498-3)	34 August	Shifted beths.
BILIAN ATOLI	60 Arrival: 2 May 1946 Departury: 23 August 1946	-	Alongsade Langer Ship LCC 320.
SADI <b>JSL</b> L LOC SADI BATIR LO Deconteminati		27 August 0945 1020	Medicafe Ships Clearance Board eboard to Inspect the Phip, and made the following recommendations: "The ship is safe for operation from a redictogical standpoint
laik Volt and			with the exception of the evaporators. Which will be checked by the evaporator board."
cer of duties ( and salv	▶ repairs ship <u>USS_Proper</u> (AGR+3) was a mer- tru i B.I. (Repair and Service Unit). The of this units included repairing, towing, reging ships and supplying provisions. This is provided a Fleet Sust Office. a motion	23 August 1940 78 August	Underway for Kenjatein.
pleture	is previous a fluxer sent office, a morion exthensiv, as well as recreation, welfare, of factilizes	24 X.Squat 0921	Assived at Meajalean.

# USS Phaon (AR8-3)

## USS Pollux (AKS-4)

28 August 1200	Reducte Ships Clearance Board Inspected evaporators. Responsives calloisgically clear for Anilling but while not to De opened Without presence of a conditus	)Λ J-1γ γ(γ	<u>Conf</u> al and divers in fest <u>Rifi</u> tized for radioartivity Reference 5, p. VII-1-57 Al. Stiarts to raise boot unsuccediful, Censed offeres to raise <u>Pilo</u> rflish.
3 September 12 September	Lede Seagabein for seart Harbor. Arrived an Pearl Marbor.	l August	Redioactivity on network of the still sup merged B <u>(loc</u> fish, and reported as 15 to Whiter) depth We R/24 bours: An 4 feet (1.2 meters) above deck, 2 F/24 pages.
Crew State: 1	U <u>\$</u> s Plid <u>e[</u> 15k (SS-306)	9 Xuqush 0900	Differents and personnel transferred to re- canned carget ship US <u>S</u> Follogr <u>e</u> (APA-BD).
Crew Eccastion	Arcteal 27 May 1946 n For Shot Agel: - <u>55 Bottlowa</u> , 1924-2341	13 M(4)12	Preparations made for diving operations.
inew Localion for Sept BARER: Bollineau Shat ABLE Localion - 2,506 yangs 12,3 km 44 Shat BARER Localion - 260 yangs 1238 meters, 640 Such 25 July B346, 316161 Lagion Task Unit and Function		16 August	Solwage operations contround. Row: lister 10 no 40 degrees to starboard, and the control output att of feame 300 appeared to he displayed about a train (2.54 cal to starboard, The deck was covered with
the supmarine <u>Piloritsh</u> was a nember of TU 1.2.4 (Submarine Onto) Submarine Division (12) it was			stic (to some places (B nothes (s6 nw) deep) wid isolated chunks al colat.
EV60461	s vessel dusing CHOSSROADS. Iss side was ed before each shot. Proposite time detord d radiation intensity foirt were placed charnoat.	21 August	Polociosh declared lost as a result of BARKER.
Shot ABLE (1 July, 6900)		an opderwater survey was made it Pi <u>intft</u> an during the Bikini resurvey in July 1947.	
30 .r.me 0745	Crew evacuated		<u>USS</u> POLEUX (ASS-4)
1 -30,9 1543 1605 1320	<pre>V58_https://www.79/phanedialboardiogliewe on Pi<u>lotitus</u>), Eulah repaired its kwarding team aboard, clearing <u>Pilotitash</u>, <u>Pilotitash</u> reported Geiger sweet theietesize 6, p. Vii I it al. DSM declared Pi<u>lotitash</u> radiologitally clear fue postding (keterence 6, p. Vii a libur).</pre>	Breinf Atoli Shot ABL: Jo Shot BALIS J Geontaminal Operational Final Cleara Text Unit on	: Arrival, DC May 1945 Elegariure: 13 August 1945 Raiton D2 Mat (4) Sart 19 Osation: 11 Mat (4) Sart 19 Pow Location: Puget Sound Clearander, D9 November 1945 Real 25 January 1347
a 2019 1145 14.0	Demage curvicol parties boarded. Maxempal insportion complement.	T <b>5</b> , 1	Répair and Service Juitte.
These was no damage of veryequence to Plicotish from ADEA Defensive 20. [1 appears the cree renumed to Pilotfigh by ) July.		L Guly TBCO GARS	Free:ed Bikipi Lagoon. Askipping in Wester 207.
y (aby (535)	Shifted betths, proced alongside USS fullings (0.8–11).	2 Josly 1043 2124	Underway to shift berths. Analasied in bosen Salas
	25 (06) (- 0834)	20 July 1122	Targer vesse, Di. 1157 moored alongside.
24 July 0545 0920	Come evacuates). Print (th) was subterged.	1840 5551 94535 ;	LET 1187 departent. 25 July: 08351
29 Jayly 0954	USS <u>Coucal</u> (RGR-8) reported able to this only two body. Econ Planting, (Systematics	25 Fally	Unserved stat (Diright and proceeded) to range [all=im.
	5, p. vts : 28 x:.	γ:56 July 0823	Anchored at New (alein.
Preparte time recurders at 6 radiation intensity films were recommend from Pilotitals (Reference &, p. VII J 63 BJ, Efforts to raise boat unsuccessive.		6 Muguai ,517	ፖር ያርስታዊ ላይ ዝነድነግን.

5 August		1 July	
2654	Roterwa Bliant Lagono.	ARRÓ	tedening to pick up learnament party from
B MO	Anchored in berch Q.	0915	(35 <u>5 Kenneth MA)(Ing</u> (MV )4). Proceeding to pick up instruments and
19 Auĝuat 1449	Underway to Resisten	09.45	budys. Commented subveys speciallons.
1441		1275	Proceeded to target ship Hagsha to inves
20 August			regate reparted threst made dispersion.
<u>0</u> 8∠0	Arr(ymd gt Wwa)alein.		no fites found to exist.
1649	Underweg so Reast Marbor.	b 2a0	Resuped walvage operations
·	Realized of Franks I black to	5625	Completed salvage operations and pro-
29 August	Actived at featl Macbor		evedes to Whiting to discharge passen gers. Instruments, and banys.
		\$751	Archored in besth 85. Biking.
	USS PRESERVER LANS-BI	••••	
		5 July	
Care Shoes f		1640-1720	traded fustrument buoys and air tanks on
	Erriyat. 28 May 1966		LCM.
Bit int Acold	Geperturn – 28 August 1986 Jataon: – 21 mai (50 km) (	4 July	
SECT BASIS CO		6 July 0043 0985	Towest Prote to new borth.
	an lacation. tos Angeles	1130-1143	Engaged in divising operations to retrieve
	legrance. B Decemper 1946		recompany indictions. Sent dimen down to
final Clearar	ice 6 January 1987		recover fustrament. Inscrument encovered,
			dive: on buard.
[Ath Unit and		1255	Promoted in Decily 85
	wage ship Prekerver was a member of tu	1515-1810	
	Salvage U≕bli, Prese:ver's roln dutlets in Kalvaging damaged target versels after the	BLR C	new (arrib) Anabased in besch 55, Bikins
	performing Mesigency repairs and inghring	1070	Realized in Decisions, Eachie
fires.		B July	
		1620 1960	Towed NOC BIG to new beach
38-51 ARTS (1	july, C400)	1962	Anchezed in begin BS.
10		2. 1. 1.	
ecut. C[ LCS]	Onderway the accurdance with CTU 1 2.7 Co	¢ التلغ 1001	Underway to deliver wire to target ship
16.53	Grder D 45, proceeding to area Metcury.	100.	USS Arbanoas (66 33).
	which a set historical so also restanti.	16/9-1641	Moored starboard side to Arkansas to
1 July			transfer stre.
1040	Enthered in special becch C, nothwest of Ency island.	1700	Apphased in Derich 85, Biking,
1		10 July	1
γان⊊ ( مناه	Underway to put boarding team aboard that	057 150	Uniformary to take No. 2 motor isanch in
4	get shape.	1329	that motor: Junch in itm.
OBINO ORICO	Boarding team algorid target younely to?	1128	Apphoned in perits 85 Wiking.
	816 and LCT-818. UTS reported to be Get-	2300	Underway to investigate target vesses Vo-
	ger sweet (Reference C. p. VII 1 22 Ar.		160 alongside kekansan: 40.160 lineing
8907 6916	UnderWay to Energian versari 200 A). Rectric starticatif side to 200-89	2450	in port and in desper of sinking. Laying to alongside 90 (6%)
092Í 0945	Hoarding team on YOG 83.	4170	caying to analysica to rect
J000 (03)	Reacting teacher in farget ship USS Bruie	JL July	
	(APA-65): reparred Brule Golger sweet	2055	Underway with y0 160 in tow to also west
	Reference 6. p. vij 2-29 #).		of target array
1055	laying to, ovar taxget shig (3 <u>5 bughes</u> (DC 410).	0750	Proceeding to beaching also near Ersu. 2514mb.
1059-1145	Team on board Inghes; separated magnes	1525	Cast off now, standing by
	Gelger Awen: (Reterence 5, p. p. VLL 1	1210	YO 100 beached on seet northwest of Enco
	29 A) Notation and the second state 155 Marsada	13.86	Island.
1215	Moered peruatide no sanget ship US <u>S Keva</u> da - (ah 16).	1725	Anthoned yo 160 Anthoned porthwast of Energ Island.
1220 2265	Team briegden <u>Hevad</u> a	1.77	THE REAL PROPERTY OF CITY 22 COM.
i 250	Underway to fight fires on Nevada 5 port-	12 2019	
	whiles weighted unsafe for postding (Refer	0800	Commenced salvage operations on YO JoC.
	ence 6. p. VII-(-30-4)	1243	Underway, preparing to the VO-too.
1 168	Sires extinguished, proceeded to USS -	1415	Communicat cowing YC-100 Tree beach.
1340	Whation (AP-7). Joying to off Whatton.	1520	The Cable Patted, parenected to become Nex low,
1747	Monrôlog tean left Preservus via motor	1695	ner-sone. Second toet attan to to b≜b, conserved.
	leanch for Wharlon.		SCOAGY PUZZ.
£433	Anchored in being d.	1210	Anchored north of Eneu Island.

## USS Preserver (ARS-8) 12 July

1145-1800	Sens drivers down with shallow-mater gran	23 July	
	to inspect design of YC 160.	L 123	Codeways to bring Magaig to desired head
			ing.
13 cody		1745	Robred to <u>Hageth</u>
600	Commenced salvage operations on YD-160.	1340	Took weeds, on stern rable wire, brought
10.2	Commerced steady pult on VC-160 to keep		Mage to sead by Lo (85.
	is from broathing.	154*	Atter taking enclose on board from USS
1325	Towned YO-102 to beach.		Henchico (APR-45) to anchor Larges sub-
10)5	towed Yo too in int of shes island		potine USS 2004 (SS-201), underway to
1432	Anchored near beach ()'S		TAGE
1200	Commented counterflowding starboard tates - of WO-160.	1630 2290	Anothered in Decit 222, Bikini.
1625	Got undersway to the worked the styrighter	20.00	<u>168</u> <u>Etian</u> (AN-19) monoped alongstate to (eteiver Anchors (An program) Turka
102.	water in heaching the off bath end of		termine of clock for marined child
	Eneu island	Shal B <b>AREN</b> C	25 J. LV. 08251
1:10	Recharged not themes at street is land, Yo boll		
	la tem	24 July	
		::05	Completed transferring anchors to Rijah
10 July			to boot funa.
58.30	Commenced selvage operations on YO-162.	3.25	Atchased in berch 85, Bikint,
		1271	Bearding feam would cham abuged for BAREP
15 Belg			Cay operations
2618	Childreway to now 50 (65 no semptisely root	1256	Underway from Slitted Lageer, from area
	ing in beest 229.		MetCaty.
1414	Teok YO-160 to the adoreside and Tro		
	creded to berth	25 July	
1554	Mooted Y2-160 to tearing buoy in betth	110.	Ensered Ener Channel.
	279.	1125	Anchored de berzh C.
1625	Gor underway to assign u <u>ss</u> Perila <u>im</u> a	1949	rugeteed, to block postgred fear or wig-
	(ARS-42) in eeving Segare		2664.
1775	Moored to beey at borth 143.	3708-1721	Boarding Lean on Stagara.
		251-1305	Team bearded target vessel 107-15.5.
16 219	store of the discount of the second sectors and	1727	Anchaevel de bezen L.
11.2	siver on reck; djuer had been underwater		
1335 .540	unspecified petrod of time. Second divet down.	26 361¥ 1424	المراجعة والمعرفية المحمد
1602 1814	Thing diver down.	1424	<ul> <li>Inderway to survey target vesters and make radiatogreat corvey of writer to</li> </ul>
1414 1414	Secured opward tools for 45e day		divé.
	the stand of many sources and and age	1.150	Tow wire secured to another chair of rac
C1 Daily		1.00	que ship J33 Saltor 1424 816.
29,75	posentes diving operations to secure	1450	Due to codecscrively, cast off the este-
•	wire to Magano anchor.		and proceeded but of area to Auchorage.
C#50	Giver secured wise to anonor.	1914	Anchored to beach 344.
17:5	Commercial having up Regard anoner.		
9429	Dropped Negato anchor in assigned spot.	27 July	
1525	economia in Sweet Sh. Heatel.	2935 1359	Engaged in Faller coving operations.
		2451	Anchored west of beething seas near fail
19 3.29	Participated in RAWER rehearsal.		Ion to assist in putting on bow and steen
3:42	chameteray to go allongside ranget ship usp		ancho:s.
	Hisgana (494 47)	2925	Anchoring of Wellow completed.
в,°он	Envered Enew Charnel.		
1252	Circled Riagers to simulate practing.	20 JEJY	
: 31 !	Life Led Farget ship Lid Poursy vinla (68	1402-1647	Orderway with observers to rour taiget
	)8: se situlate bonsding.		eredy.
2950	Anchored in Death 95.	1,750	Anwhored this yards (b) ( meteory) south of
			beach 3/9.
20 36.9	1	10	
Do.71	Underway to specard anchos YD-160 to an-	29 July	
-13.00	chotoge (n langet allay.	0910	Childe Tway to vicinity of Salley to take
υ') <b>0</b>	Underway with YO (60 in tran	:055	Gelger seatings Neard size and a 195 Chickense 1975 bit
0870 1243	di-160 Anchered in assigned berch. Anderway from TU-160 to ref.wl.	1647	Noored alongside USS Chickasaw (ATF-83) Anchosed.
		1941	And Hot Bull
	Anghored in Seria \$5.	)0 Puly	
an July		C811	Underway to wash down target ship USS
23	Charlesteen to the target still USS college	(613	Gesconade (APA-55).
	(pp-400) to new perstr.	0853 1015	washed down Gestaneder Kanvluding with
1134	Noored alongside [tigge.	-074()	Seluer readines.
.2.4	Underway with Tripte.	LOCO	Proceeded to beaching area at Enal to
144B	Triege anchored in Service 129.	10.00	pequee enchar to target supporting 1555
2530	Anchared in Desth 85.		Dentude 155 1151.
		1715	Ancheted off Engl.

#### USS Preserver (APS-8) 30 July

≩k50 L108 L°10	frequent in operations to pull stern of Dentucky wavy from the viern of Rughes Anomised in special bench C	ł
	-	
۲۱۹۹ £ 1956ع 1954ع	Underway to wash down harget whip USS Conyaghaa (OO Jile with sattwater and fatget websels (27 705 and (27-10)) with	7
0400-1010	powdered loam. watawa down Conynghan with Antiwater and mooted alwegside to send a team aboatd with Gelger weters to take readings.	R
1403	Underway to tenses ship 198 Casteros (APA-10) to cate Geoger readings and	п
1107	spray with fues. Completed fasing Geoger craditors, com network spraying down with powdered ches	
1255	ical foam. Completed spraying Carteset and pickeeded to LCT-705.	
1921	After taking Geoger readings, commenced	
1040	spraying LCS 705 with fear Comptered spraying 127-105 and proceeded	
1358-1405	(a LCT 101) Sprayed LCT-1053 with Seam, used a total of 192 5-galion cans of predered foat an	0
140 1	both Largel verseur. Proceeded to USS Palmyza (APS)T! 21 to	
1.100	renew supply of chezical foat. Upon receipt of massage that no foatite	
1726	onalfable, get underway to anotherabe Anchored in special berch C	
L Apgast		
D 142	Underway in wash down C <u>e</u> tterei in target afsay.	
0510-1004	whether and come concerned with two 5 back - whether and lock	П
1019-1077	Hendlor tear aboard Catterer to Lake . Deiger readings.	
1125	Rooted allogitide Rectaine:	
105	Indemay to carget ship 025 Peasacola	
1415	4CN 240. DSH and party came aboast to ditact open ettota in privateg potencyclicter pares	
1425	abort in LCVI boarded Pensacula and Instal	I.
	th redshippically unsafe for rebranding.	
FeeD-1255	Meshed down Pensacola with two blinch contress from close aboard	
1545	Mooted to Densaccia and platest subwersi- ble pump aboard.	
1550	Brachand toan boarded Pennacola to take Geoger readings.	
1615	Transferred equipment to deck of Penga-	
1620	cola. Kudetany fion <u>Beniserota</u> to anchorage eation of berth 145	ı
2 Abgust 1404	Rearing activities. Recharged in special beach, 615 yards	
- ••	(6)7 meters) south of meth 379	
3 August		
0733	Dodecway to weak down locget ship (33) New York (58-)4) with saltwares and take	
	Celyn: realtrau.	
1131 1919-1110	kaping down New York. Completed taking readings on New York and	1
1715	proceeded to anchocage Anchored south of borth 379.	

5 Magust 0927 Anchored in beaching area near Eneu.

August 0110 0017 Engaged to cowling operations with Oper-Code -1020 Anchored south of Serth 339. 66791161 0122-1335 Sugaged in cowing operations with AFU-29. Sheaged in coaling operations with USS 1355 1460 Quarts (13-150) 1506 Anchored in bejuh Bb. AGGUS : Underway to park no hoerding rease and 2735 boase Penney lvar ta-DR20 Rebarked boarding sear. 0930-1630 Searching team bearded Pennsylvania: zeam departed Via prain boot. Underway en roure to vicinity of USU 1015 Gronge Clymer to disempath working par-(1#5 Warking pairies disembasked in LCRs. Anchored in Nerth (Cl 1632 1722 ALC: NO. 0130 Underway to pick up breaking that and board Nevade. Hostoing Leas aboato. 0755 Moored elonguide Moyade 3015 Boarding team and working party boarded 091 U 449404. p. 14-1530 togaged in pumping operations on Nevada 1600 1625 Mashed down Nevada's decisi and superstructure with salewater. Boarding Lesk Tett Nevada via boat. Anchored in berch 107. 16.02 1648 C Aequise Á7/5 Underway to enbork divers and calbulage cal peoplets to second instruments. 0756-0921 Subaried divers and monifron. Anchored in mosth 285 hear lostruments. 695.1 5138-3520 Diving operations undertaken to recover instruments: located one instrument. Anchored to beach 107. 1649 2 August D50N Redbological memory and six dovers reparted aboard in connection with games meter salvage operations. 0947 Underway to conduct operations in berth 161 1037 Anchored so beech \$61. 3110 3320 Engaged in civing operations to recover games metars, failed to find meters due to deep layer (6 to 8 frem [!.R to 2.4 meters]) of fine rotal on matter. 1 August 1145 Georgen memory of came abounds 1204 1439 Employed in diving operations: Latied co Find wheek of meters due to heavy layer of pulvertized coset. 1451 Anthoted in new posision 180 yates (165 metalist off. 1505-1647 Request in diving operations in new posttion. failed to Jecate wire. Gelger monitor left the ship 1106 4 August M-4-----

1210	<ul> <li>Undermay to continue operation (ii) recov</li> </ul>
	way of game meters by dragging.
9820	Two radiological monitors came aboard.
1155	Anchored in negra 161.

1

# <u>USS Preserver</u> (ARS-8) 14 August

134:-:700 1910	Engaged in dragging instrument rable; failed to locate instruments. Monitors left the whip:	Operational (	or logasion. Los Angeles Tearanter 10 December 1946 re. 31 Cerember 1946
15 Avgust 19902 2608 19221 1928	Continued deagging operations for second any of gamma maters. Ronnel alongside <u>Schalmer</u> to receive equipment shar had been placed an <u>Progr</u> <u>fol</u> e of 1 August. Underway to continue diagging operations.	o pombol Posto, f acois (*)	Function "propulsed bartarks ship <u>Program</u> (signeds t of 70 2.8.3 (Dispatch Boat and Boat he ship provided such services as inter eight and passenger securce and also func- s a carracke ship.
tovi	Anchozed in Derth 204.	Shot Arte 11	Ju-y. (990):
16 NAUNA 0756	Set underway to conduct giving operations of suffer target ship USS Safatoga (CV J) to recover Stationence and conduct gen oral exemitation.	0950 0950 1910	Observed about ASLE from approximately 20 cml 156 New montheast of the lagoon Enneced Biking Lagoon. Passed buoy 4 about to stathcord.
6825 6857	Moured in polity 161. Sense warvey party to determine condition - around Sacatoga and sake soundings.	.94) 3 July	Anothered in Decth Joy.
L9 August 1045	Proceeding to Mervela by take 10 to Iman	1212 1258	Ducesmay to shift berths. Any hored to bench 95.
1215 1252 1415	Noted alongside Nevada. Disensatived account detail to Nevada. Orderway for Kesja(eta etto Revada to	4 24 Cuty Shut PAREN 121	Restine activities 5 July, Cabby
\$424	tor. Anchos detail returned.	26 July	separated addated inqueer.
22 Noques 1225 1510	Rochored Nebeck in Sectorial II. Resigniers Charlesung to Bitch	25 Duly CA55 	Ko rojne from Bikini ro kompelap Anchored an Racamian
23 Rugust 1911	Nachased in Sersh 51, Block.	20 July (553	Underway og Blivini. Entorset Bikini Kagoon.
20 Nagust 0815	Anchored rest <u>Pennatola</u> to take it in	26.27 _900	Angraged to pecify 385.
lois	tane. Godernay to Keajalein etti P <u>eneargi</u> a in Kon.	71 July 0820 3825	Dideaway to shift berths. Ancharod in besch 95.
26 August 2925	hochaigd <u>Sereavaig</u> in beren k 4. Keaja 1850-	2 Anquat LOSD 2610	underway to new anchorage. Aurburnd each of beach Tare
1253 27 Rispuer 1252	Underway to Pikink Rechard in Nertis 307, Similar	L Naquest C927	Anchored in berth 95.
25 Reguet 0845	Manand alcompetitie energies study JSC 127-220	12 Mugust CP13	Jachored In Serth 116
,122	to sake in now. Underway to Swajaleta with L57-220 Sec. 17∾.	14 Nortune 1328	Anchered to besth 95.
30 Jugus) 0924	Anothered (207_200 in last) # 4. Realatebu.	19 Normet 1936	Departed Rikini Lagoon en route to Kwa- nalein.
31 August 8841-0920	wadiological Safety Officer aboard to Sakpash the ship for (44)044729kiy.	20 Nuquen 1800	Anchored Kwajslein.
1 зерсегана	underway from Newjalets to Pract Marbor.	7 30pt/08046 1533	Underway to Pear? Murdon,
	<u>155 2965que (5.1</u> (APB 44)	12 September	Asilved at Petri Halbot.
Crew Steel 1			PRIMA LUGEN
Bicici Aloli Bisini Aloli Shet ABLE . or	Ariival: 20 May 1346 Departure: 19 August 1946 acton: 30 rm1 436 km; 47 cattor: About 20 cm1 (32 km) 45	State: Apoll :	en Archeni: 1º June 1946 Departure: 20 August 1946

- From Encation is: Short Able 1995 Recklughta (AFR 779) Crew Localium for Shot BAS!K Rockingham Shot RULF Conditor: 1,194 yerds (1,4 Ex) www Shul SAREN .an allon 1,990 yards (1.8 Pm) WMAR Such 22 December 1946, Awayalarin
- Fask Ochinard Ferention The depressed Dersen Analysis, Print Pagen was a set. tee of To 1 7 1 Heatthest-1p and Crubber Units. Chabber Unwindon 25. 25 www. a target wessel dat (og CHARGERIANS ligtly, and contations' representation) for itman from the Army Signal Unit. Its CROSSROADS start compared of 0.5 periods we tension from the state before much test. Prime Mager was so suchly consistented during his ferming to figure. and was given the hull number of 12 000.

Shol Half (F Jyly, 1990)

- 1 July 1820 185 (exclusion 1447-42) completed inspect ing Prinz Legen (Refrecence 6, p. v?)-f. 116 65

- 2 Juny 1250 Usa, Canserver (Aus J4) was directed to plain a fear ou Polot Fugari (Peterener 6. p. VII F 50 PO. 12100
  - Conjectives reported branz regen dapaget sweet (Beforence 6, p. VI) 3 32 Al. Over: all condition was good with no major data seco
  - Pesnelvanked Team & Asian Rockingham su 1540 kiganz Bugen.
- y tat. ( Crew returned aboard 16 live.

/L.Jalv

1250 Crew evacuated to Rockingham.

Shirt FARLA (25 Noty, 0805)

- 1 Norpest
  - USS Clamp (RRS-12) was discussed to place. A46.0 a teaching tear on DSACC Pring Pugen Retrience 5 p. VII 3-61 PU
- Loss <u>Deliver</u> (ARS 23) was discovered to pressure to the victority of 1871 Marriet. 2 Apquist (AP I) on plot up a heardbest ream, procend to Prinz Sugen to Wash 1: down with risin pressure stream, and place boarding ream woard the radiological valerance pozubirel (Reference 5, p. VSI [ 1; p)
  - Cleap reported completing a 1 from wash 1152 down of Prinx Eegen and placed bowrding term on board.
  - (201 Colliver Inspection of Prime Rogen complete, the boarding ream returned about Darts sumportion ships theferenze b, p VII -7 74 (6)

J. August.

- 1410 1206 Print Bagen Standed by 1031241 boarding 1300 1690 Sear 4. The after engine room was likeled with 70 lockers (76 fm) of water (311 fpd) patienals were purped dry. (76 1.2 c) doted on ACM cost to the wordward side of Pikini fuk a food of sand to scrub Assess Peloy, Rogers (Reference, 11)
- # 10 Account bearded daily for decompativation by lear because of comparatives, but it tray every 2 heurs. Sname consisted of 11 ees as the

brightniking of this payled and increased to 32 men as the cadiation level decreased. liter the end of this period at below dects, spaces were endedlogted by chemical-125 engineers bounded each day so sake the peopleton system operational.

Radiation reactings should Prinz Kagen between 4 August and I October are listed in Table & D.

16 Junparch

- 6:05 Pabaz Rugen personnel casasterned to ae Barried talget shap sto sladen (APA b3).
- 20 Jugast Towed to Kwojalean by arSS Murawe CATE: 1015.

Filter Kugen was later deached on Cathorn Inited. Rea (Allertin, and sank in procedure 1945).

# Fable & III - Radiative reddings (R424 news) aboard Pring Luger aass decs.3

Û.a	\$ <b>#</b>	hinings	Average	4195
				· ·
4.5	Jaust	1.6	37	4.5
5.8	18066	Ç 5	20	2.1
6.8	Japost	0.54	1.5	3.5
A > b	ացային	п.7	65	1.7
8 Je	ugus t	04	C 4	1.5
9.9	ugust -	U.4	6 4	E. 9
10 Je	oguni –	P.3	φı	i 7
14 A	ugusr		C 45	
1.5	c luber		6 35	

Hole 1

Ake description required below and the decision

Source: Antennee 4

#### USS QUARTY (Da-150)

Crew S12e 50 Hiteni Bloll Arches' & Asris 1946 Riteni Anull Peparture: 77 August 1946 Shof #5.1 Location - Enchored at Evajulein Sho: 24664 cocation: - Rongelas Ameri Ceculiarination location Paget Scund Operational Ligarence 12 December 1946 Flow) Clear ince 10 December 1746

lask Williard Febrician Conviete barge Quatry was a member of for L.B. I (Repair and Service shift), large thips obtained cry provisions from this base.

Shot ARLE (1 July, 0900)

E Intel Abdhored in Serth 794 - Kwajaleko Accal. ) July

2440 Underway in the by gen hunkee fars (00). ter Philippi

Jerg.

192% Anchorest 2 mpV (3.2 kp) of 1 Bilkent island.

# USS Quartz ([X-15D)

### USS Reclaimer (ARS-42)

5 GALY 1462	Anothered an betak (Sec Bisson).	2 Guly 1500	Reboarded and commented inspection of aut
)A July 16:2	Dederway for Perpetap Broz, rewet by Migh See	1AUC	spaces. Preitministy isopectics complete. Reported Carage ductobased to CVTP 1. Ship mas- radiologically wate.
19 J.:19 :195	Residenced to terriby 27 Horspelage Atrill	يونيون ف وري:	Completed columbilities by at ships recommend permain operations
Shist Admin 12	5 Ju'y, OB161	Co	
25 2015	Archaired in period 22. Rengelage Harber	- SPOC MAKER [2 - 74 July	5 July, 8836,
12 - 1619 1616	Contrary to have by Manjee for Atkins	1105 1105	Commenced evaluating processes' to an ord- ance with CUTF   Operation Plan ( 46 Completes the evacuation of personnel to
)) .:⊾ty 0935	Anthroad in Beach 168, Hiking	J. Kag Lak	junijes. Jas Rycialger (MKS-57) pronveded to Talj-
J August C945	sational concerns cars of perchan		jat and wished (f down theroughly using high-portour house their one 6, p. VI) 1 (i) (0)
Muq_st :440  4 A_Qu~	Afrikanst at a tertif tetteror (45 Stat (45) Sitemi	2 Angust 205	1805 (Jamp (436) ))) sent a controlog party to frequent failor before wathing down and locit is wright sout (Reference 6.
.445	Richard in Destriggisht, Bikiry,	.325 10%	p VIC-1 19-61. Class washes down Talbol Cleforence fil
7: Acquist 1800	An Wend year nettaurn is Blkaut Marber.	6 August	No. 411 1 16 11 201 422 1 60 111
77 August CP45	tendermany bu Renjaleto sowed ky 155 Stops 1835-191	074)	Talbor Gelger sour Average tradings on Bain dock. 1.5 9/26 house forelestic. 0.8 8/24 hours, manimum reading paker chips and root scales. 4.0 6/24 hours:
)' Xagyat N313	Anchored in brith shall of Xing 4. We jatein.		utoing Kyace. Ole 19724 Stores: Bridge Ceck. 7.8 2774 Hours: Coside Europes and Decking He Everige. 0.7 Hold rouge.
12 Kaspini		Support C	
1055 1355	Targer Vessel 103(00-569 a.crosike 11(11), 149 mederwayi	(8)	The explaint department offlores, and USH representatives rebeated and com- mouned built and contential inspection
3 Seprember 335	Underway 14 Pearl Martoot Lewest Street.	1032	Inspection completed, inspecting parries events for the samp
15 September	arriurd at Death Baight	toare tre t bh'g pitog.	e fuether reports of reporting in the
	<u>USS PALPH INLAGT</u> (\$1-390)	. 1 August	All <u>Tarino</u> : Detacove, Constanted in 18 <u>2.</u> Rockinghes (APA 2291.
BIN'NI ALGER	dy Afrikaal – 1 Jahr 1946 Departure, – 26 August 1985 - Por Shot ABLE – USB Reference CAPA 455	0957	Talbut Gelger sour Rhadings tefore washing sunged from 2.0 to 4.0 P/24 sours on Main detk: conversion ap to 3.0 R/24 acquist.
Shou Agua (c:	(Por Grot SATTA Regiles gklan - 161 gards (* em) 4 galbon - 7,815 gards (* 1 mm) wim	11 August	Resignative Telber personnel rear-Sected in 48 <u>5</u> Sockewill (AMM-240).
Sunt Parith 19	Na neur Geujaleir	14 August	Focus live Tarbol personnel scattered to Recognity.
	thanstwork Encypes failbud was a member of CU 1.2.1 - Mer Julij, protinger Hightster I. It was a	21 August	repside average 3.3 w/24 cuvic.
1 argel	nge sourigt personages injection in it, waar a van seel during CROZZZPUNIS (its crewe was disperience event waar, in rann2⊶d aboard (r	26 August	Toward to Kwalletein by USS Organia (AB-84).
operated.	meteolisanic volulyment that the Electronic milliografi	70 kept <del>eb</del> er	faprida average 0 18 0/24 mains.
Shet Ad. C. (1	001p. (2007)		<u>1</u> 55 <u>81614107</u> 8 1495.421

10 June 0910-004% = 201 pervasion1 evacuated to Hegridov.

#### Crew Size: 10 Birling Barr Birlyzi: 1 June 1986

Biphon Aleli Devolution - I September (946 Supt ARLE exclusion - 24 set (45 km; [ Supt RA466 | ocation - 11 nm! (70 cm; 5) Decadeworkelisch Enclusion - Los Angeles Operational (Repranse: - 24 December Mich Final Chearance - 8y 4 December Mich Final Chearance - 8y 4 December 1946

"wyk Unkt und Kum thum The salwage ship Perioducen served in TV [.2]" cSalwige Unit: Sectaimer's functions derFederi Salwige Unit: Sectaimer's functions derFederi Salwige Unit: Sectaimer's functions derFederic periodation eine DSM was peberked aboard Reclaimer to contribute all selvage speciations. The DSM aboard Reclaimer mode the first imperiate of the Sarves error.

Shou ABLE (1 July, 0900)

1 July Ateabing in ales Mercury in accordance with rate ) operation Plan 1-45, with 054 and CNU 1 2, Lepharked, in accordence with CUTE J dispetch, 10 1116 5.2.1 proceeded to record: Bikini Mioll. 1110 Treasing worked of TO 1 2.7 to take postrion as visual guard. Enterned Jacobs with 170 1.2.3. Were east. 1230 and as areas were declared cafe moved to choses. Reprised to wateray prope of salves area with safety ponitors (Peference 6. p. vil 1 6 a). Operating in water invited a codimentically level between 0 | and 1,0 k/24 bours. Prorpaded on vacious courses and aparels in go along postation of tacget with USS 1525 Pennsylvania (H8-30) to estinguish fires. 1572-1555 Sprayed water on homosylyapia flows. Pennsylvania cleated 1 M/C 1615 Fought fites on carget ship USS Men York (68 34) -1625 New York cleared. 1/13/1/142 Fought (hre on arget ship (FSS\_Regade (68-461) 1742 (")en;ed <u>Heyad</u>a. 1899 Anchored in Derth 196, 803100 2 July Stepand Drough forget area on varians courses and spects while RSM and PSU Če1≦. 1-2.1 directed salvage operations. 111111115 Directed stream of exter from the foreard ronitor on Negada to excloration free 1123-1737 Placed a stream of water on carger ship USS [Adepender/ov (CM 22) from forward monitor to extinguish fire on Sampar deck aft. 3846 Anchored to berch 422 Bistoll. 3 July Ó754. Underway through carget array

1090 1610	Laying to off Larger vesses Artic 53, put
	Swardsong team about 5
1041-1510	Reared to <u>Myvade</u> and put beending ream aboats.
1220-11/2	Record alongside target ship but Argamust (98-33): boarding test aboard.
1916	Proceeded to salvage utili.
1500 5530	Moored to rasget vessel 50-165.
1530-1556	Moored to target ship 605 Crittenden (AFA 175, branding rean aboard,

1645 Anchored in berin Ballet, off Ener Island.

5 July	
3250 3253	Land appling buoy enoring in berth 54
	Able.
1345	Moured alongside LSM-60. The ship from
	which the RAKKH weapon was to be blog Towed 150-60 to spring brog was.
1954 (440) 1500	Rochoaled in Servin 143. Bistini
1000	WACHDING IF DESUG 140. HERCHI
4	
4107 0 4250	Index we from broke 141
6603	Underway from berth 101.
C916 1141	Clanding by to tow <u>Revails</u> . Towns god presentated Nevada in botth 269.
U45	Undersway from bench 259 for vicinity of
1743	usedeswary trow dents zoe tor vicsnity or 1888 Mayeri (AH-12) to stink no safety den
	HOLY ADART THE INTERNATION OF A PARAGE ADART.
14.00	
1500	Repried to break 161.
1500 - 7945 1800	Engaged in diving operations. Nadiological afficate init the ship.
1605	Machuloencal attracts into the ship.
1 2019	we develop the Alexandrian state of the state
0000	Nodialogical afficeix came aboard
0924 1139	Engaged in diving operations on leg of
1000-11-10	mooting buoy.
1330-2236	Engaged in operations to beave in an her
1520	cleate and angless from toxy.
1779	Physician and party came abtard to make rudbological text of two men.
	radiniogical text of two pen.
1600	Physician and party late ship.
1445	Hadbolingled monitors (v)t ship.
9 July	AL . L
2425 1641	Planted exclose tagoy .
1500	Moored in Decch 219
a tota	Westerness de la service de la service de la service
08; •	Noderway to vicinity of carget shap 1985
	Pennarose (CR 74) to tecover Leis Arbo
	envils (ATF-148) anchor and chain.
0549	Archored on vicinity of beret to/ and
0011 114	
0920-1786	Engaged in civing operations in search
	of gother and chain.
14	
10 July 0245-12:0	Ferrend in divise sweeting, be served
0662-1230	Engaged in diving operations in recommu- Achemony's anchor chain and anchor.
	ACTOMANY & ATRINOT PROBAT AND ARCTOP.
يوادد ال	
9748	Unterway from the utchaling of perth 27
0.00	to go alongside Large: ship USS Brule
	TALA 66).
0875	Mongatte starboard aide to Aruje in vi-
04.1	cinaty of berth 59.
085)	there way with Acgle in the to begin the
1049	Anchored Bruke in herch 180.
1045	Completed anglation Project underway (or
1042	target ship USS Maycane (DD 402).
1125	Anchored in besth 239 more Mayrens.
1514	Underway from the the the 200 with Playment In-
14.	tow to beach \$42
1447	Archared Mayres: in length 242. let go row
	where a suprementation of the second se
1805	General Sy.
1815	Anchored in bessin 241
12 JULY	
0915	Underway from beach, to this paleyra
	INFSt12 31.
0976	Hoored alangside Palmyra.
1035	Subscreay 1/0= Paleyra atter receiving

1035 Onderway 170\* Pallyra attor receiving aboard four reels of 1.548 ince wires

# <u>USS Reclaimer</u> (ARS-42) 12 July

# USS Reclaimer (ARS-42)

		14.15	Network whether the states of
	prostendent to taiget thip (188 <u>Ap</u> ly un <u>te</u>	(é)5	Second Marila came to store of Magato
	7 <u>14</u> ¥ 364 253		and commenced swinging is to pair.
1125	Underway feet vicinity of Salt Lake City.	2673	<ul> <li>Schuret Magaza steep to bary, gast off.</li> </ul>
1045	Anothered an petch 324.		time (inc. and got underway for berth 164.
1025	Uniferrary from beach U24 wollgo allon-patche	. 175	Notted to buoy in Death 164.
			Notice to boy to service service
	ARREND to discharge four reels of whee		
1400	Moored alongwide JHDC () in warinity of	19 July	
	ring_ taland.	1275	Reflected tear bench (29
1405	Atsonarged frust reals of wide to MHDC-12.		
1408		11 1. 1. 1.	
	-meletanay CCSP ANOC+11.	21 July	
1425	Applested in Easth 124.	25.20	AngAkared in betth 43.
		10.9	inderway to plant socar benys.
10.0019		1067	Planted first schat flay in victority of
C123	Underway from betth 324, promotion to		Yutiyatan Isberd
	victnity of periods, to assist to re-	1145	
			Planted record bury.
	eseries Sale Lake Ciry.	(14)	Endesway to anchorage berefit.
2010	any ing to the secondary of Sait Lake City.	:220	Abstraced in vacantary of beach 129.
0934	Particl the wire to Call Lake City and		
	commonied cowing is to hearth 184.	27 7c(y	
		•	had a second sec
.:25	Anotholed Gall (ake City in booth 164)	05.55	winderway to go alongside (Ré) Kennico
11:0	Let ga the cable.		(ሐርዜ-ናъ).
1(15	Repred stationard above to Sait Fally City.	1005	Réported autorgandes Rec <u>ut</u> ions
(005	Underway from alongside Gail Lake City	1275	Underway from Henrico to 155 Gypsy
1326	Anchaige in perth 129.		(herso)()).
1326	WHENHIEL IN DESCENTION.		
		: ] . A	≂opred to <u>Cyp</u> age.
a July		: 190	Coderway from Gypery, proceeding to vicin-
1040	Underway for vicinity of Haves to balvage		say at target submarise OCC_bulletIsh
	LCH.		(05-386)
1035	Took proking (KP 2-4) to rear and pro	14,25	
111.2			Anered to moortage sway in Derth 161.
	seeded to USS_General Hall (1997-50)	1e.0	. Underway know berth 161 is no alumaside
1315	moored to Gatation Hall mean beach 94		Plicifish to suspend anthres.
1040	(et ge strking <mark>(CH</mark> to punctur Hal).	1853	Reported a sumplation of the theory
. 455	Underway from alongside Gunsion Hall to	1912	Commenced suspending three as 4 ion and
1122		171.	
	26112 43		chorse on #21art1cb
:405	Apphored is besch 43.		
		Anot BAKIR (	75 da 5, C805)
DY July			
2.42	Undersway from brills 45 to vicinity of	24 July	
		5140	distant companying and on been doing
	earget 18/10 Segaro.	0140	Similared seaperving and use from Philes
6905	moared starboard side to aggets.		tisa.
11:0	Made pergentalitens for getting a Active.	0657	Clearast 20 (at Cl <u>ub</u> ), proceeding the moorging
11:0	wars properations for getting a arrange.		
	ware partieral tens rot getting in attempt.	0120	Wristen' on Sway besch ub1.
(6 3e)y			Whose's is twoy bosch col. Underway from mesth (61) proceeding to
(6.32)y 0025	Generative form alongslide Ra <u>gar</u> o.	0120 De21	When the budy besch off. University from mession (61, proceeding to whether of Palmyra
(6 32)y 0025 0025	Jevenny form alchevide Ka <u>sat</u> o. Ancholed in betch 194, Bikini.	6100 De21 0040	When is two were build of the second
(6.32)y 0025	Generative form alongslide Ra <u>gar</u> o.	0120 De21	When the budy besch off. University from mession (61, proceeding to whether of Palmyra
16 32(y 0005 0075 0075 0610	University form alongside Ka <u>gat</u> o. Ancholed in betch 194, Bikini. Jugerway first colin 144 no Maggiol.	6!00 De21 0040 1131	When the Subay Beach (b). University of Subayra When the state of Subayra Anchored Shive Colory of Derich (25). Reported Offic L 2,2
(6.32)y 0005 0055 00570 00570 00413	Generatory fords alcheside Ra <u>gat</u> o. Racheted in Decch 164, Bikini. Guperway from conth 146 na Nagato. Meaned in partition of Nadajo.	6100 De21 0040	When is two were build of the second
16 32(y 0005 0075 0075 0610	Generatory forda almógalde Ra <u>gat</u> o. Ancholed in betch 154. Bikini. Gaterany ford beigh 144 for Nagyon. Meored in portaiter of Nagaio. Eksternay forda portaiter of Nagaio. pro-	6190 Depu 0040 1131 531	When the Subay Beach (b). University of Subayra When the state of Subayra Anchored Shive Colory of Derich (25). Reported Offic L 2,2
(6.30)y 0005 0075 0075 0070 0403 070	Derkeneny forda alcheside Ragato. Ancholed in betch 194. Bikini. Datemay fort terth 144 no Nagato. Methed to pertside of Nagato. Derkenaay from prittide of Nagato. pro- cewoing to perts	6100 De21 0040 1131 111 25 July	Mission' of Subay Besch (b). Underway drom Desct. (6), proceeding ta- of Underway of Subay <u>ra</u> Anchored Sn victory of Derth (25). Brownied (Th: L 2.2 Underway to area Mercuty.
6 52(y 0005 0075 0070 0013 0770 0215	Generatory forda almógalde Ra <u>gat</u> o. Ancholed in betch 154. Bikini. Gaterany ford beigh 144 for Nagyon. Meored in portaiter of Nagaio. Eksternay forda portaiter of Nagaio. pro-	6100 D023 1131 311, 25 July 0941	Mission' of Swoy Besch (b). Underway drom Destt. (b). proceeding ta- of Infly of Sabmyrn Anchored Sn victority of Derth (25). Recorded Ch: 1 0.7 Underway is area Mercoty. Task unit proceeded to area Correpiliar
(6.30)y 0005 0075 0075 0070 0403 070	University form altrightde Ragato. Ancholed in bench 194. Bikini. Observaty from only 14% no Nagato. Meaned to partiside of Nagato. Centeracy toole partiside of Nagato. pro- centing to parts Account in bench 244.	6100 De21 0040 1131 111 25 July	Mission' of Swoy Besch (b). Underway drom Destt. (b). proceeding ta- of Infly of Sabmyrn Anchored Sn victority of Derth (25). Recorded Ch: 1 0.7 Underway is area Mercoty. Task unit proceeded to area Correpiliar
6 52(y 0005 0075 0070 0013 0770 0215	University first alregalde Ra <u>gato</u> . Rachated to betch 194, Bikini, Stokening first parts 194 na Nagato. Meaned to parts 194 of Nagato. Underway first parts 194, and words in besch 944. And wolding iffards and memoush diving open	6190 2023 0040 1131 311 311 25 July 0945 1057	Mission' on Surgy Desch (201) Underway drom Destt. (61, proceeding ta- of) Infly of Salwyrn Anchored Sn victoricy of Derth (25, Recorded Chi I 2.7 Underway is area Mercody, Task unit proceeded to srea Correpiliar Swgan Americanisms in member Japose.
(6 32)y 0035 0670 0670 0673 0770 1215 112	Orientary form although de Ragato. Anchored de betch 164. Bikini. Superady from corth 164 for Nagoro. Meored to portside of Nagato. Centerady from portside of Nagato, pro- centing to ports Anchored in besch 244. Anchored in besch 244. Anchored in besch 244.	6100 D023 1131 311, 25 July 0941	<ul> <li>Mission' of Suray Desch (b).</li> <li>University from percent (6), proceeding to the Endsy of Subwyrn Anthoned Sn victorisy of Denth (25).</li> <li>Brownind Chi L 2, 2 Underway is area Mercuty.</li> <li>Task unit proceeded to area Catespillian Swigan Amobiaeering to member (agood).</li> <li>Proceeded Fridughout Farget Arisy to</li> </ul>
6 52(y 0005 0075 0070 0013 0770 0215	University first alregalde Ra <u>gato</u> . Rachated to betch 194, Bikini, Stokening first parts 194 na Nagato. Meaned to parts 194 of Nagato. Underway first parts 194, and words in besch 944. And wolding iffards and memoush diving open	6190 2023 0040 1131 311 311 25 July 0945 1057	<ul> <li>Mission is Surge besch ubl.</li> <li>Underway drom besch. (61. proceeding tareth unbesch Sn victorsy of Denth 125. Researched Chi L 2.2.</li> <li>Underway is area Mercenty.</li> <li>Task unit proceeded to srea Catespilliar Smegan American Sne to area to sreat Catespilliar Smegan American Sne to area to sreat Catespilliar Smegan American Sne to area to set area to set to state to set area to set to set area to set</li></ul>
(6 50) 0005 0075 0076 0013 0770 (215 0112 (116	Orientary form although de Ragato. Anchored de betch 164. Bikini. Superady from corth 164 for Nagoro. Meored to portside of Nagato. Centerady from portside of Nagato, pro- centing to ports Anchored in besch 244. Anchored in besch 244. Anchored in besch 244.	6190 2023 0040 1131 311 311 25 July 0945 1057	<ul> <li>Mission is Surge besch ubl.</li> <li>Utilerway drom besch. (61. proceeding tale): infly of Salwyra Anchored Sn victorsy of borth 125.</li> <li>Brownked (11: L 2.2)</li> <li>Underway is area Mercety.</li> <li>Task unit proceeded to srea Citexpllian Segan Amosbace and the results (agess).</li> <li>Proceeded First while of Ped Line (1)</li> <li>Shegen cargets, cetside of Ped Line (1)</li> <li>Shegen and Losife First (2)</li> </ul>
(6 50)y 0005 0075 0070 0013 0770 (215 0112 (110 (1 50)y	University form although de Ragaro. Ancholed in berch 194. Bikini. Suberway fort berch 194 re Nagaro. Meoned to portstoe of Nagaro, pro- ceeding to perts Accounted in besch 244. Case and begin filet and emercial diving oper- ations in topert whip a huit. Secured diving operations.	6190 2023 0040 1131 311 311 25 July 0945 1057	<ul> <li>Mission is Surge besch ubl.</li> <li>Utilerway drom besch. (61. proceeding talet) infly of Salwyra Anchosed Sn victorsy of berch 125.</li> <li>Browniaed Chi L 2.2 Underway to area Mercuty.</li> <li>Task unit proceeded to area Catespillar Swigan American try to remains Cageso.</li> <li>Proceeded Fridughout Fargel Array to Saspent sargeto, cutside of Ped Line (1) R/24 count und insite Fred Line (1) R/24 count und insite Fred Cine (0)</li> </ul>
(6 50) 0005 0075 0076 0013 0770 (215 0112 (116	Orientary form although de Ragato. Anchored de betch 164. Bikini. Superady from corth 164 for Nagoro. Meored to portside of Nagato. Centerady from portside of Nagato, pro- centing to ports Anchored in besch 244. Anchored in besch 244. Anchored in besch 244.	6190 2023 0040 1131 311 311 25 July 0945 1057	<ul> <li>Mission is Surge besch ubl.</li> <li>Utilerway drom besch. (61. proceeding tale): infly of Salwyra Anchored Sn victorsy of borth 125.</li> <li>Brownked (11: L 2.2)</li> <li>Underway is area Mercety.</li> <li>Task unit proceeded to srea Citexpllian Segan Amosbace and the results (agess).</li> <li>Proceeded First while of Ped Line (1)</li> <li>Shegen cargets, cetside of Ped Line (1)</li> <li>Shegen and Losife First (2)</li> </ul>
(6 50)y 0005 0075 0070 0013 0770 (215 0112 (110 (1 50)y	University form alongside Ragato. Ancholed in betch 194, Bikini, Sciences for beich 194, Bikini, Sciences for portside of Negato. Heartway from pricide of Negato, pro- ceeding to perts Anchored in beach 944. Cost moding influent and should diving oper ations to topert whip a huit. Secured diving operations. Subboway from Decid 195, presenting to	6190 2023 0040 1131 311 311 25 July 0945 1057	<ul> <li>Mission is Surge besch ubl.</li> <li>Underway drom perst. (6). proceeding takes in this of Sabmyrn Anchoseki Sn vicinity of Derth 125.</li> <li>Browniand Chi: L 2.7</li> <li>Underway is arms Mercody.</li> <li>Task unit proceeded to srea Chrospillian Segan American Sng to memory Sagoos.</li> <li>Proceeded Philospikos Parget arms to Shopeeded Philospikos Parget (Shopeededed)</li> </ul>
(6 30) 0035 0570 0570 0570 0570 0570 (215 013) (110 (1 30) 0025	University form although de Ragato. Racholed de berch 164. Bikini. Joserway from solih 164 for Nagalo. Meored to portside of Nadalo. tenderway from prisside of Nadalo. tenderway from prisside of Nadalo. tenderway from prisside of Nadalo. ceeding to ports Anchosed in besch 244. Cost wolding inform a remenced diving oper- stions in topped whip a huit. Secured diving operations. Disectory from Doith 266. presenting to whiching of Magang.	6100 De21 0040 1131 311, 315 315 944 1057 ,114	<ul> <li>Mission' of Surger Desch (D).</li> <li>Underway from Desch (D). proceeding earlier through a solution.</li> <li>Anthorned Sn victorisy of Derch (25. Received Ch. L.2.)</li> <li>Underway is area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to any to area the cody.</li> <li>Task unit proceeded to state of Ped Line (18724) normal, and insite File Cire (C.18724) anisel, and proceeding to conter of other any to area the proceeding to conter of the seguer actay.</li> </ul>
(6 50)y 0005 0075 0070 0013 0770 (215 0112 (110 (1 50)y	University form although de Ragato. Anchored in betch 154. Bikini. Superway from portside of Nagato. Meored in portside of Nagato. Underway from portside of Nagato. pro- ceeding to ports Anchored in besch 344. Controlling officer arconecto diving oper ations in invest whip a huit. Secured diving operations. Distance of Nagato. Descrept list to terboard side of Nagato.	6190 2023 0040 1131 311 311 25 July 0945 1057	<ul> <li>Mission is Surge besch ubl.</li> <li>Underway drom perst. (6). proceeding takes in this of Sabmyrn Anchoseki Sn vicinity of Derth 125.</li> <li>Browniand Chi: L 2.7</li> <li>Underway is arms Mercody.</li> <li>Task unit proceeded to srea Chrospillian Segan American Sng to memory Sagoos.</li> <li>Proceeded Philospikos Parget arms to Shopeeded Philospikospikos Parget arms to Shopeeded Philospikos Parget arms to Parget arms to arms to Pa</li></ul>
(6 30) 0035 0570 0570 0570 0570 0570 (215 013) (110 (1 30) 0025	University form although de Ragato. Anchored in betch 154. Bikint. Suchanay from parts de la Bikint. Suchanay from parts de la Nagato. Meored in parts de la Nagato. Destending to parts Anchored in besch 344. Contending officer a nomenced diving oper ations to invest whip a huit. Secured diving operations. Subscrapting perations. Subscrapting of Nagato. Secured list to anthoused side of Nagato and compensed towing to prevent begeto	6100 De23 0040 1131 3113 3113 25 July 0945 1057 .116	<ul> <li>Mission' of Surger Desch (D).</li> <li>Underway from Desch (D). proceeding earlier through a solution.</li> <li>Anthorned Sn victorisy of Derch (25. Received Ch. L.2.)</li> <li>Underway is area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to any to area the cody.</li> <li>Task unit proceeded to state of Ped Line (18724) normal, and insite File Cire (C.18724) anisel, and proceeding to conter of other any to area the proceeding to conter of the seguer actay.</li> </ul>
(6 30) 0035 0570 0570 0570 0570 0570 (215 013) (110 (1 30) 0025	University form although de Ragato. Anchored in betch 154. Bikini. Superway from portside of Nagato. Meored in portside of Nagato. Underway from portside of Nagato. pro- ceeding to ports Anchored in besch 344. Controlling officer arconecto diving oper ations in invest whip a huit. Secured diving operations. Distance of Nagato. Descrept list to terboard side of Nagato.	6100 De21 0040 1131 311, 315 315 944 1057 ,114	<ul> <li>Mission' of Surger Desch (D).</li> <li>Underway from Desch (D). proceeding earlier through a solution.</li> <li>Anthorned Sn victorisy of Derch (25. Received Ch. L.2.)</li> <li>Underway is area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to any to area the cody.</li> <li>Task unit proceeded to state of Ped Line (18724) normal, and insite File Cire (C.18724) anisel, and proceeding to conter of other any to area the proceeding to conter of the seguer actay.</li> </ul>
(6 30)y 0035 0670 0870 0913 0770 (215 0132 (116 (1 30)y 0625	University form although de Ragato. Anchored in betch 154. Bikint. Suchanay from parts de la Bikint. Suchanay from parts de la Nagato. Meored in parts de la Nagato. Destending to parts Anchored in besch 344. Contending officer a nomenced diving oper ations to invest whip a huit. Secured diving operations. Subscrapting perations. Subscrapting of Nagato. Secured list to anthoused side of Nagato and compensed towing to prevent begeto	6100 De23 0040 1131 3113 3113 25 July 0945 1057 .116	<ul> <li>Mission' of Surger Desch (D).</li> <li>Underway from Desch (D). proceeding earlier through a solution.</li> <li>Anthorned Sn victorisy of Derch (25. Received Ch. L.2.)</li> <li>Underway is area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area Mercody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to area the cody.</li> <li>Task unit proceeded to srea Catespillian Seguer another any to any to area the cody.</li> <li>Task unit proceeded to state of Ped Line (18724) normal, and insite File Cire (C.18724) anisel, and proceeding to conter of other any to area the proceeding to conter of the seguer actay.</li> </ul>
(6 30) 0005 0075 0075 0075 0075 (215 0112 (100 0075 0050\$	University form although de Ragaro. Ancholed in betch 194. Bikint. University fort period 44 re Nagaro. Meened to period Addie of Nagaro. Meened to period Addie of Nagaro. Descending to period Accholed in besch 244. Case modifies ifficer a remenced diving oper- ations to toperto this south. Secured diving operations. Disectory from Desch 266. proceeding to which ity of Magaro. Descent for a toperto pick of Nagaro and competent toward to provest Nagaro sta competent toward to provest Nagaro sta competent toward to provest Nagaro for a caloying toward USS Descented (Addie A).	6100 D0040 1131 1131 1132 1132 25 JU(W 0941 1057 114 1057 114 1057 114 26 JU(W 1425	<ul> <li>Missel's Surg besch ubl.</li> <li>Underway drom besch. (61. proceeding tale of thity of Sabayra Anchored Sn victory of borth 125. Brownked (11: 1-2.2)</li> <li>Underway to area Mercury.</li> <li>Task unit proceeded to area Citexpllian Began Amobiacering to memory tagoos. Proceeded Missing to memory tagoos. Proceeded Missing to memory to Sispent cargets, cutside of Ped Line (1 R/24 counsel and insite Flam Line (1): R/24 counsel and insite Flam Line (0.) R/24 counsel and proceeding to center of dispens Sabara proceeding to center of dispens callery. Jeshored in boris 365. Bilkent.</li> <li>Oxderway (now besch 169.</li> </ul>
(6 30) 0000 0000 0010 0013 0013 0013 (215 010 (1 30) 0025 0578 0942	University form alongside Ragato. Recholed in betch 164. Bikini. Superway from portalide of Nagato. Meaned to partside of Nagato. Rechosed in besch 244. Contracted in besch 244. Contracted in besch 244. Contracted in besch 244. Contracted in besch 244. Secured diving operations. Dudeoway from Decompositions. Dudeoway from Decompositions. Decomposition for the Decomposition of Nagato station of Nagato. Decomposition of Decompositions. Decomposition of Nagato. Decomposition of Nagato	6100 De21 0040 1131 111 25 July 0945 1052 .116 .116 .116 .117 26 July	<ul> <li>Missel's Subay besch ubl.</li> <li>Underway from messt. (61. proceeding earling to Endby of Salwyyn Anthoned Sn victorsy of Denth 125. Brownkod Chi L 2.2 Underway is anna Mercusy.</li> <li>Task unit proceeded to sing Catespillian Degan Amobiser and the results fageos. Proceeded this should hange array to Inspect sampets, cutside of Ped Line (1 R/24 nowar) and insite File Cire (C.) Skiews where proceeding to center of Styles should proceeding to center of Styles should be to 50. Bikent.</li> <li>Charles (1 boris 369. Bikent).</li> <li>Charles (1 boris 369. Bikent).</li> </ul>
(6 30) 0035 0035 00370 00413 0370 (215 0107 (110 0025 0518 0940 0940	University form allongside Ragato. Rechoired in betch 154. Bikini. Superway from portside of Nagato. Mecored to portside of Nagato. Mecored to portside of Nagato. tederway from portside of Nagato. proceeding to ports Anothered in besch 244. Case moders is increased and a suble. Secured diving operations. Disecway from Doith 256. proceeding to writhity of Magano. Secured lise to tearboard side of Nagato and competend board to provest Nagato side competend to be a Starboard side of Nagato side competend board to provest Nagato from competend tober. Let yr starboard stober. Soderway in Viciobary of Saging.	6100 De21 0040 1131 311, 25 July 0945 1057 ,116 (137 26 July 1425 1500 1752	<ul> <li>Missel's Subay besch (b).</li> <li>Underway from perch. (6). proceeding earling the Englange.</li> <li>Anthored Sn victorsy of berth (2).</li> <li>Browned Chi L 2.2.</li> <li>Underway is area Mercury.</li> <li>Task unit proceeded to srea Correspilling.</li> <li>Megan Amashaeer and the remater Sugress.</li> <li>Proceeded the sphort harry to Inspect surgers. cutside of Ped Line (1).</li> <li>R/24 course and insite File Cire (C.).</li> <li>R/24 course and proceeding to conter of the state of</li></ul>
(6 30) 0035 0035 00413 00413 00413 00413 0135 0135 0135 0045	University form all highlide Ragato. Anchoired in betch 154. Bikint. Suberway from portside of Nagato. Meored in portside of Nagato. Underway from portside of Nagato. pro- ceeding to ports. Anchoired in besch 344. Contending officer andemotic diving oper- ations in invest whip a huit. Secured diving operations. Suberway from Doith 356. proceeding to vicinity of Nagato. Secured list to nonrowing to prevent Nagato shi compensed towing to prevent Nagato shi compensed towing to prevent Nagato shi compensed towing to prevent Nagato from cologing toward 155. Proverve TARN B). Let ge standard stoker. Soderway in Vicinity of Nagato. From redship to parts the of Nagato.	6100 D0040 1131 1131 1132 1132 25 JU(W 0941 1057 114 1057 114 1057 114 26 JU(W 1425	<ul> <li>Missel's Suby Deskh (D).</li> <li>Underway from Desth (D).</li> <li>Underway from Desth (D). proceeding to the triby of Salwyra Anchored Sn electricy of Derth (25).</li> <li>Besarked (Th: L 2.2)</li> <li>Underway is area Mercody.</li> <li>Task unit proceeded to srea Catespilliar Degen American and Mercody.</li> <li>Task unit proceeded to srea Catespilliar Degen American and the stea Catespilliar Degeneration and the stea Catespilliar (C).</li> <li>R/24 course and the stea Fine Cire (C).</li> <li>R/24 course and t</li></ul>
(6 30) 0035 0035 00370 00413 0370 (215 0107 (110 0025 0518 0940 0940	University form all highlide Ragato. Anchoired in betch 154. Bikint. Suberedy from period 44 no Nagato. Meaned in period of Nagato. Denterway from period of Nagato. Denterway from period of Nagato. Denterway from Desch 344. Controlling officer and encoded diving oper- ations in instruct whip a huit. Secured diving operations. Disferway from Desch 366. provideding in victory of Nagato. Secured line to heatoged pide of Nagato and context towing to provest hageto tion context towing to provest hageto tion context towing to provest hageto from context towing to provest hageto from context towing to provest hageto from relaying toward USS Departure (and A). Let yn stanboard stober. Soderway in victories of hageto. Provincing to period by hageto. Pasard tow line to Nagato to prevention.	6100 De21 0040 1131 111 25 JU(M 0045 1057 1057 115 26 JU(M 1475 1500 1752 1805	<ul> <li>Missel's Suby Besch (b).</li> <li>Underway from Desch (b).</li> <li>Underway from Desch (b). proceeding earlier integration of 20 berch (25).</li> <li>Reserved (5) (10.1.2.2.)</li> <li>Underway is area Moreovy.</li> <li>Task unit proceeded to sees Catespillian Began American and Horeovy.</li> <li>Task unit proceeded to sees Catespillian Began American and Horeovy.</li> <li>Task unit proceeded to sees Catespillian Began American and Horeovy.</li> <li>Task unit proceeded to sees Catespillian Began American and Horeovy.</li> <li>Task units proceeded to sees Catespillian Began American and Horeovy.</li> <li>Task units proceeded to sees Catespillian Began American and Losite File Catespillian (11) R/24 housen and Losite File Catespillian (12) R</li></ul>
(6 30) 0035 0035 00413 00413 00413 00413 0135 0135 0135 0045	University form all highlide Ragato. Anchoired in betch 154. Bikint. Suberway from portside of Nagato. Meored in portside of Nagato. Underway from portside of Nagato. pro- ceeding to ports. Anchoired in besch 344. Contending officer andemotic diving oper- ations in invest whip a huit. Secured diving operations. Suberway from Doith 356. proceeding to vicinity of Nagato. Secured list to nonrowing to prevent Nagato shi compensed towing to prevent Nagato shi compensed towing to prevent Nagato shi compensed towing to prevent Nagato from cologing toward 155. Proverve TARN B). Let ge standard stoker. Soderway in Vicinity of Nagato. From redship to parts the of Nagato.	6100 De21 0040 1131 311, 25 July 0945 1057 ,116 (137 26 July 1425 1500 1752	<ul> <li>Missel's Suby Deskh (D).</li> <li>Underway from perch. (D). proceeding to the Unity of Salwyra Anchored Sn electrisy of Derth (25).</li> <li>Besarked (Th: 1-2.2)</li> <li>Underway is alma Mercody.</li> <li>Task unit proceeded to sens Chrospillian Degen American and Mercody.</li> <li>Task unit proceeded to sens Chrospillian Degen American and the sens to Ped Line (1 R/24 house) and the side of P</li></ul>
(6 30) 0035 0035 00413 00413 00413 00413 0135 0135 0135 0045	University form all highlide Ragato. Anchoired in betch 154. Bikint. Suberway from period of Ragato. Hearing from period of Ragato. Hearing to period Acchoired in besch 344. Case modifies in faith a network of Vinte oper- ations in topert while shull. Secured diving operations. Suberway from Decid 355. personations in Suberway in visions to prevent Nagato and compensations is prevent Nagato from contexting toward 955. Personate (and 8). Let yr starboard stoher. Suberway in Visionsy of Sagito. Provedbag to period by ha <u>ctor</u> . Persond tow line to Nagato in prevent Nar.	6100 De21 0040 1131 111 25 JU(M 0045 1057 1057 115 26 JU(M 1475 1500 1752 1805	<ul> <li>Missel's Suby Desk (D).</li> <li>Missel's Suby Desk (D).</li> <li>Missel's Solution Dest. (E). proceeding to the Unity of Salwyra Anchored Sn victory of Derth (25).</li> <li>Reserved (Th: L 2.2) Underway is alma Morcoty.</li> <li>Task unit proceeded to srea Citexplinar Megan American and Morcoty.</li> <li>Task unit proceeded to srea Citexplinar Megan American and Morcoty.</li> <li>Task unit proceeded to srea Citexplinar Megan American and Morcoty.</li> <li>Task unit proceeded to srea Citexplinar Megan American and Losite File Cite (C).</li> <li>Sv24 contain and Losite File (C).</li> <li></li></ul>
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### <u>USS Reclaime</u>r (ARS-42) 27 July

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L110 1345 2505 1506 2519 L551 L551	<ul> <li>while scening shrough target array.</li> <li>Acchared near tarih (41)</li> <li>Underway on various courses and speeds throughout carges accay.</li> <li>Moored alongside target ship USS Conyog has speeds to serve along the starget ship USS Conyog has.</li> <li>Salety monitors and party aboatd Conyog has.</li> <li>Moored alongside larget ship USS Main wilght (00:419).</li> <li>Salety monitors and party aboatd Wall wilght.</li> </ul>	I¢
L110 1345 2505 1506 :539 L551 1552 1610 15215 1624 :533	<ul> <li>while signify an output integet array.</li> <li>Accharact mout tarrin (41).</li> <li>Undermay on various courtain and operation throughout carges accay.</li> <li>Moored alongside targes ship USS Conyog has apprediately content about Conyog has.</li> <li>Moored alongside larges ship USS Main wright (Donator) and party aboatd Kain wright.</li> <li>Safety Monttons and party aboatd Kain wright.</li> <li>Safety Monttons and party aboatd Kain wright.</li> </ul>	16
L110 1345 2505 1506 2519 L551 1522 1610 1524 2541 1505 2 August	<ul> <li>Motherski Levin (mg. Narough tenget array. Auchased Levin territ (44).</li> <li>Undermay en socieus courses and speeds throughout canges accay.</li> <li>Moored alongside tanges ship USS Conyog had http://wonitcle.and party about Conyog had.</li> <li>Moored alongside larges ship USS Main wilght bordies and party about Kain Kain Safety Monitcle.</li> <li>Safety Monitcle. and party about Kain wilght.</li> <li>Safety Monitcle. and party about Kain Kain Larget.</li> <li>Safety Monitcle. and party about Kain Kain Larget.</li> <li>Safety Monitcle. and party about Kain Kain Larget.</li> <li>Safety Monitcle. and party about Main Larget.</li> <li>Safety Monitcle. and party about Main Larget.</li> <li>Safety Monitcle. and party about Main Larget.</li> </ul>	
110 1345 2505 1506 2519 1551 152 1610 1515 1624 2543 1305	<ul> <li>Machaeved warr terrib (44).</li> <li>Machaeved warr terrib (44).</li> <li>Underway en warbout courses and operate terrib (44).</li> <li>Underway en warbout courses and operate terrible.</li> <li>Moored alongside terrible ship (55) Conyog has specified.</li> <li>Salety Monitoris and party eboard Conyng has.</li> <li>Moored alongside terrible ship (55) Main wilght (50:419).</li> <li>Salety Monitoris and party eboard Kajn wilght.</li> <li>Salety Monitoris and party atoatch Kajn wilght.</li> </ul>	16
L110 1345 2505 1506 2519 L551 1522 1610 1524 2541 1505 2 August	<ul> <li>Machaeve isom ing shrough isosget array.</li> <li>Aschaeve isom tarrih (41).</li> <li>Underway en various courses and speeds throughout canges accay.</li> <li>Moored alongside target ship USS Conyog isam specific.</li> <li>Salety monitors and party eboard Conyng hap.</li> <li>Moored alongside larget ship USS Main wright (bordlyn).</li> <li>Salety monitors and party aboard Kajn wright.</li> <li>Safety monitors and party aboard Regions.</li> <li>Safety monitors and party aboard Regions.</li> <li>Safety monitors and party aboard Regions.</li> </ul>	1;
L110 1345 2505 1506 2519 L551 152 1610 1515 1624 2543 1625 2 August C235	<ul> <li>Machine Sceniing Abrough Energet array. Rechased year terrib (41.</li> <li>Underway een varibure compare and speeds throughout conget accay.</li> <li>Moored alongside target ship USS Conyog had approx 2010.</li> <li>Salety Monitors and party eboard Conyog had.</li> <li>Monred alongside target ship USS Main wright Donalton, and party aboard Conyog had.</li> <li>Monred alongside target ship USS Main wright Donalton.</li> <li>Salety Monitors and party aboard Majn wright Donalton.</li> <li>Salety Monitors and party aboard Majn wright Donalton.</li> <li>Salety Monitors and party aboard Majn wright.</li> <li>Salety Monitors and party aboard Majn wright.</li> <li>Salety Monitors and party aboard Majn wright.</li> <li>Salety Monitors and party aboard Majn.</li> <li>Salety Monitors and party aboard Majn wright.</li> <li>Salety Monitors and party aboard Majn.</li> <li>Salety Monitors and party of Salety Party.</li> </ul>	
L110 1345 2505 1506 2519 L551 152 1610 1515 1624 2543 1305 2 August C235	<ul> <li>Monthaské kenning skrough tenget array. Abcháské kennitartíh (41.)</li> <li>Welephagy en variburs contract mas Speeds throughout conget accay.</li> <li>Moored alongside target ship USS Conyog has stored alongside target ship USS Conyog has.</li> <li>Monred alongside target ship USS Main wilght (beidside) and party aboatd Conyog has.</li> <li>Monred alongside target ship USS Main wilght (beidside) and party aboatd Kajn wilght.</li> <li>Safety Monttons and party aboatd Majn </li> </ul>	1;
L110 1345 2505 1506 2519 L551 152 1610 1515 1624 2543 1625 2 August C235	<ul> <li>Mathematical start of the start of</li></ul>	1;
L110 1345 2505 1506 2519 L551 152 1610 1515 1624 2543 1305 2 August C235	<ul> <li>Matcharek isom ing shrough tenget array.</li> <li>Aucharek isom terrib (41.)</li> <li>Underway en various courses and opendation arrays accay.</li> <li>Moored alongside tanget ship USS Conyog isam specific.</li> <li>Salety monitors and party aboatd Conyng hag.</li> <li>Monred alongside larget ship USS Main wilght (00:419).</li> <li>Salety monitors and party aboatd Wall wilght.</li> <li>Salety monitors and party aboatd Main wilght.</li> <li>Salety monitors aboatd Pays acces.</li> <li>Salety monitors aboatd side of Party apply.</li> <li>Salety wilght.</li> </ul>	1;
L110 1345 2505 1506 2519 L551 152 1610 1515 1624 2543 1305 2 August C235	<ul> <li>whole signify shrough integet array. Auchased year terth (41.)</li> <li>Wederway en varbage compare mas speeds throughout canges accay.</li> <li>Woored alongside target ship USS Conyog has http://wontcois.and.party about Conyog had.</li> <li>Woored alongside target ship USS Main withe lon-4101.</li> <li>Safety Monttols and party about Kajn withe lon-4101.</li> <li>Safety Monttols and party about Majn withe lon-4101.</li> <li>Safety Monttols and party about Majn wither.</li> <li>Woored about target ship USt Magtord (Nel 205)</li> <li>Safety Monttols and party about Perglary. Anchored ab being 164.</li> <li>Woored ab being 164.</li> <li>Woored ab being 164.</li> <li>Woored about target size of Pergrapia. Lay- ing to (0, vicinity of Safet Laye City in Deck 100.</li> </ul>	1;
L110 1395 2505 1506 2519 L551 1522 1610 2515 1624 2593 1624 2593 1624 2593 1625 2 August C235	<ul> <li>Matcharek isom ing shrough tenget array.</li> <li>Aucharek isom terrib (41.)</li> <li>Underway en various courses and opendation arrays accay.</li> <li>Moored alongside tanget ship USS Conyog isam specific.</li> <li>Salety monitors and party aboatd Conyng hag.</li> <li>Monred alongside larget ship USS Main wilght (00:419).</li> <li>Salety monitors and party aboatd Wall wilght.</li> <li>Salety monitors and party aboatd Main wilght.</li> <li>Salety monitors aboatd Pays acces.</li> <li>Salety monitors aboatd side of Party apply.</li> <li>Salety wilght.</li> </ul>	1;
L110 1395 2505 1506 2519 L551 1522 1610 2515 1624 2593 1624 2593 1624 2593 1625 2 August C235	<ul> <li>Machaeve seening shrough tanget array. Acchaeve seen tarth (41.)</li> <li>Watermay en various courses and speeds throughout canges accay.</li> <li>Woorned alongside tanget ship USS Conyog has specific and party eboard Conyog has.</li> <li>Wonred alongside larget ship USS Main wright (be-419).</li> <li>Safety monitors and party aboard Wall wright (be-419).</li> <li>Safety monitors and party aboard Wall wright (be-419).</li> <li>Safety monitors and party aboard Wall wright.</li> <li>Woorned as being the ship USS Main wright.</li> <li>Woorned as being the ship USS Main wright.</li> <li>Woorned as being the ship USS Maind Wall wright.</li> <li>Woorned as being the ship USC Anglord (tel 205)</li> <li>Safety monitors and party aboard Mail anchored as being 144.</li> <li>Woorned as being 144.</li> <li>Woorned as being 144.</li> <li>Woorned as being 144.</li> <li>Underway (som vic)hip of term 145 re plate boarding them and mem aboard Peg sacola.</li> <li>Boarding term classed Periames and the Use City in Beating term from Periames on Persanula statuate party of the set of the statuate party of the set of the set of the statuate party of the set of the set of the set of the statuate party of the set of</li></ul>	1;
L110 1345 2505 1506 2519 L551 1522 1610 1624 2643 1624 2643 1624 2643 1624 2643 2404031 0225 1004 2024 2415-1505 1525	<ul> <li>Machaeve service and the shift of the standard service access and speeds the standard service and speeds throughout canges access.</li> <li>Moored alongside tanges shift USS Conyeg has speeds throughout canges access.</li> <li>Salety monitors and party aboatd Conyeg has.</li> <li>Monred alongside larges shift USS Main wright (Develop).</li> <li>Salety monitors and party aboatd Kajn wright.</li> <li>Monred alongside larges shift USS Main wright (Develop).</li> <li>Salety monitors and party aboatd Kajn wright.</li> <li>Monred alongside larges shift USS Main wright.</li> <li>Monred alongside larges shift USS Main wright.</li> <li>Monred alongside larges shift USS Main wright.</li> <li>Salety monitors and party aboatd Majn wright.</li> <li>Moderway (of tanget shift data baging accession accession accession.</li> <li>Underway (of tanget shift accession accession.</li> <li>Underway (of tanget shift of tanget). Accession accession.</li> <li>Underway (of tanget) shift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession accession.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession accession.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession.</li> <li>Monred accessi</li></ul>	1;
L110 1395 2505 1506 2519 L551 1522 1610 2515 1624 2593 1624 2593 1624 2593 2 Augu:1 C235 1004 2029 2 Augu:1 C235 1004 2029 1029 1029 1029	<ul> <li>Markin simpling through integet array. Rechared year terth (41.)</li> <li>Wedermay en varbage compare most speeds throughout conget ectay.</li> <li>Moored alongside target ship (35 Conyog ham top-22):.</li> <li>Salety menticus and party aboatd Conyng hag.</li> <li>Monred within (4).</li> <li>Salety menticus and party aboatd Conyng hag.</li> <li>Monred within (4).</li> <li>Salety menticus and party aboatd Kajn wight (00:41%).</li> <li>Salety menticus and party aboatd Majn wight.</li> <li>Wederway (of target ship 00: Megland (00) 000)</li> <li>Salety menticus and party aboatd Regiong.</li> <li>Monred aboatd regiong.</li> <li>Monred aboatd Pepisoka.</li> <li>Underway (of vicinity of balt lake City in beech 100.</li> <li>Boarding team from Periodiane, on Pensanaja status party (00:en.</li> <li>Onderway aboaside Pensucola Anchored in Vicinity of berth /10 Rederway aboaside party</li> </ul>	13
L110 1345 2505 1506 2519 L551 1522 1610 1624 2643 1624 2643 1624 2643 1624 2643 2404031 0225 1004 2024 2415-1505 1525	<ul> <li>Machaeve service and the shift of the standard service access and speeds the standard service and speeds throughout canges access.</li> <li>Moored alongside tanges shift USS Conyeg has speeds throughout canges access.</li> <li>Salety monitors and party aboatd Conyeg has.</li> <li>Monred alongside larges shift USS Main wright (Develop).</li> <li>Salety monitors and party aboatd Kajn wright.</li> <li>Monred alongside larges shift USS Main wright (Develop).</li> <li>Salety monitors and party aboatd Kajn wright.</li> <li>Monred alongside larges shift USS Main wright.</li> <li>Monred alongside larges shift USS Main wright.</li> <li>Monred alongside larges shift USS Main wright.</li> <li>Salety monitors and party aboatd Majn wright.</li> <li>Moderway (of tanget shift data baging accession accession accession.</li> <li>Underway (of tanget shift accession accession.</li> <li>Underway (of tanget shift of tanget). Accession accession.</li> <li>Underway (of tanget) shift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession accession.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession accession.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession.</li> <li>Underway alongshift of tanget.</li> <li>Monred accession.</li> <li>Monred accessi</li></ul>	1;
L110 1395 2505 1506 2519 L551 1522 1610 2515 1624 2593 1624 2593 1624 2593 2 Augu:1 C235 1004 2029 2 Augu:1 C235 1004 2029 1029 1029 1029	<ul> <li>Markin simpling through integet array. Rechared year terth (41.)</li> <li>Wedermay en varbage compare most speeds throughout conget ectay.</li> <li>Moored alongside target ship (35 Conyog ham top-22):.</li> <li>Salety menticus and party aboatd Conyng hag.</li> <li>Monred within (4).</li> <li>Salety menticus and party aboatd Conyng hag.</li> <li>Monred within (4).</li> <li>Salety menticus and party aboatd Kajn wight (00:41%).</li> <li>Salety menticus and party aboatd Majn wight.</li> <li>Wederway (of target ship 00: Megland (00) 000)</li> <li>Salety menticus and party aboatd Regiong.</li> <li>Monred aboatd regiong.</li> <li>Monred aboatd Pepisoka.</li> <li>Underway (of vicinity of balt lake City in beech 100.</li> <li>Boarding team from Periodiane, on Pensanaja status party (00:en.</li> <li>Onderway aboaside Pensucola Anchored in Vicinity of berth /10 Rederway aboaside party</li> </ul>	13

#### 1500 Underway from vacinity of Greath UST, prokineding to wining of Personale. (623 Anchored in Desch 219.

### USS Reclaimer (ARS-42)

2850	Anchered in herit JS7.
5 804066	
3.490	Underway from bersh 352, proceeding so
1370	which an af Francis
	vicinity of Pensacola.
1472 1269	Alongulde Fundariale
1645	Anchored in burrn Jt7, Rikini,
6 August	
0904	Codecavey from North 357 to wash down
	Tensacola with high pressure seaware:
6932	honoding team as inmediate.
(140	Cycared wide of Pentacyla
6915	Regan washing down sturboard side of
	Pe <u>vis</u> acola.
2159	Anchored to beath 182
1.174	Underway from butth 168 to go alongside
	Fensaco)a.
1035 (490	he whitefity of Regencein.
1450	Anchosed in besig 188.
2836	And Do rest in the rive 256.
10.00	was method to method who?
1 Norports	
2751	Underway in vicinity of Pensacola.
1415 (545	Record to Peopletain, placed boarding
	teast aboard.
1468	Anchored in Incents (45.
	ALCHARACE IN THE FEET OF A DATA
a	
8 August	
1908 1929	Rawhed down there acallate
1326	Active and in Section 219.
2451	Underway from bertik proceeding to Porse
	cols to place boarding to was ser brand.
1510-1610	Rearding teams on Peu strug.
ê051	Anchooed in Secul. 145
1004	
9 August	
0805	Coderway to Mayrant,
0856	Moored alongside <u>May</u> ra <u>nc</u> .
CSON	Placed two pamps blocard hayfallt.
2920 1000	Pumped not magine toost of Nayrant
1000	Anchored in Secch 1414 Haying to in el
	cleater or Mayrant, sending bearding par
	ting atsund at this ways to perform and
	Service purch
1405	
1205	And hoted the twenty 145.
16 August	
0942	Underway blow benth 145.
1005	Nusced along one processita.
/030 1126	Boarding team, aboard Separating,
(125	Acchored in perch 360.
1309 1415	Salvage party all objects service and
LIND LADY	
	Start putyles providents on Magazin
1031	Anchored in berch (45).
<ol> <li>32 August.</li> </ol>	Rostiner Activities:
на дърекс	
0011-0250	Party off ship on service and retuel
	pumps on Pensuchia and Maysunt.
1.1.4.1.4.1.1	
1150-1532	Patty off ship to service pueps on Pensa
	cola and Maysans.
1967.5	Orderway to PCrivate, a to exchange taringpo
	p IF Ph
1600-1639	Puters exchanged alongsilde provacola.
1761	An bored an britting
	······································
a harner	
ia Auguri	the letters at the state of the second
CAIO	Caderway 10 of this of Maynest.
09743-0575	laying to 1a whichty of Mayrona conduct
	ang Propert Intel
በሳንዱ በቅዱን	Proceeded to Persecus to seculus pumps.
1124 1190	Are beined the win telly of Meyoda.

# <u>USS Reclaimer</u> (ARS-42) 14 August

USS Rhind (00-404)

1605	Anchered to bears (24.	1625	Tudosway with Di <u>tterio</u> en in some en source to Exclainin.
15 August 0140	Seriy tele Abis Generations pumps de Period Maytany and Pensarola.	DS MAY AT	En foule from Bikins to Avajavein white Chickersen in tow.
1255	Marking party just to service purplies	<b>1</b>	
(32)	Bandersel Tarret vezzei ACICII 5,5 aletteite	24- NG 4000 05-20	Auchared Colorendes at Keajalvio.
1350	<pre>sciil all departed</pre>	1242	Novend aloryalde delerendet.
1610	increasing party off to seconder painty on Pensacola.	1.08	Commercies moving Crittenders to come atomysics target this USS Develop (MPA 49).
LS Murgaria		335	Stidetway kirosi alionsalide (jilat <u>t</u> est <u>de</u> e
3725	Enderway to Kee Ya <u>re</u> .	1601	peparted Residions on there to Biking.
1819 1509	Hotend directory New York. Underway from also tolde New York.	20 Access	
4415	An horse to berth 200.	21 0.4051	Rooted alongelde tailen.
		1252	Boarding teams went aboard Failon to se-
2 ' Acijus: 08:0	Poster chargable Metada, fathiologi press		move two queerstors and rundury pumping repetations. These feaks repaired on <u>Kal</u> t
(450-(455	to Li for 6 loans	(65)	The for an empty (fied period of fime
.430455	Horking berry shrvitekt pamp on Pensionja Stdetway from alutyjside sevada, proceed	.921 _910	<ul> <li>Infermery from alongable failure.</li> <li>Commerced frees of bourly page traps for</li> </ul>
	They be Auguarple to David deaft reactings		fuller to secul e solvery page.
	and shupest puers	2100	Made ("hal hourly boat true of the day
14 SP	Returned to Arctorage.		to service pueps of F <u>al</u> ion.
(C. Angles)	Postice scivities.	28 27 Actist	to service pumps on Malion. These housing
tê Arejasî			- disparance and them althoughout the day
0525 6940	Bornet wargelde Peoplylagela Commerced (Antishing power to Peoply)		and menting logra.
2057	Volta. Namp detail: departed for Demandala.	10 Accession	Continued servicing talwage places on Exclusion
:122	Entry Getail Columnal.	0.23	- Hoosed aligningsing salayer yasked enchart
1555	Kompleted Schlighting power to Petersyl Venia	(	chair and encloses for beliest or beald. Failure.
(472	Ordenesy from allowyside (econoglagola. proceeding to anthorage.	1510	the forway; pairs we deal for any terrange
66%) 1710	Purples detail separated for Recovering. Purpley detail related from Recoveride.	31 August	2001 Minute 1910 Des
		: Sectombre	
20 August	Managed a base wilds. Second Science 1	. 53	Noores Alongsise Faylon.
0951 ,010	Monaret altertaide Z <u>eresy</u> iy <u>en</u> ig. Staried theolog iserngingi Potrogiogioan <u>ia</u> in order to get the twent one of the	. 745	Underway with F <u>allon</u> in tow, on proce (com 5000-1 to magistely.
	archor cleater	2 September	E: rouge four bixing to Feijalein with
2021	raepinsod seingisg Pennsgivasna. Retuised ig assinsä⊈e	4.15.00000000000000000000000000000000000	Fallen in tre.
21 August		d Septeriaes Jost	Anchored Railon is Reajabeln Laguon, Pro-
06920	Moused alongside New York, Supplied wide telear pawer to new yery for above 3-172		CONTROL IS ADDITION OF
1.45	Nours. Moored alongside Reensyryants and envioued beach gude at their Dr.	5 Geptembri 1440 - MC	Ship a time and officers independent is redination for payers all
:412	On Servery Even Reprograms proceeded to encrosage.		bands found to be reduced by take
1656	andrimay to assist to cleating Pethayl vanja fize isynos	6 September	- Departue novaje pin tos kvari Karbos wild. NGC-7 in fize.
6735	Standling by in visibility of Perryalgenia to essible in theirg that vessel. No as	15 September	Arrived at Pest. Netbor.
1940	sterner en legalient. Retained in archorage		
	at a fair for all too a fa		USS RHTMD (20.404)
./ Activity	Normal allocation Names and and the set	(	104
1412 1205	Hoosed alongside "Hyran" in order to re- move sulvage equipment from that vessel.	free Star   Jobiat Biall	ise Arrivat, ' Sere '945
	and the second of the second		C.M.Y. JC August 1546
23 Diagonst	Postine 4.17011105.	11PM	
24 Apqusa Ce25	Anotorial alwad of Crittendur	Stol ABL: 100 Stol EAN:4 LO	ration (2000) garon (2000) meherno Al Gation (2000) garon (2000) her he March 1945, Zwalniele

- Fask Unit and Function The destroyer <u>Rhind</u> was a member of 20 1.2.3 (Destroyer Unit), Destroyer Devision 1. It was a Latger versel for CROSSROADS. Its crew was evacuated before each shor. It carried instruments, including radio arenspirgers.
- Shot #818 11 July, 09001

#### 10 June |

0910 1125 Evecuated ship's crew to <u>Rayfield</u>.

- t Joriy Gare
  - Ó418 Geograd for Himal evacuation. Texa B de pettediship.

#### 2 July

- 2348 Companying officer and sadiological accuracy itor bearded.
- 1350 Special branding Teams & and B branded the whip and began inspection.
- 1645 Declared radiologically safe with no explosive of toxic gases or other obnormal metable present aboard. However, consulwrable topside datage had occursed and meakerping ability was reduced.
- 7-3 July Remainder of crew roboarded

7 July -

3914 Shafted an hyrages to becah (22)

- Shel BAKEP (75 July, 9874)
- 24 July 0910 1353 Evocuoted Whind crew to bayfield except for Teap N.
- 21 July 0410 - Zeez B. Left: <u>Rhind</u> setured (or test. BAKER.
- ] Regust JBCC Riting processes and equipment transferred to USS Forgingham (AFA-229)

#### 3 August 1220 1514 - <u>USS (Sourcey)</u> (ARS 39) wished down <u>Billi</u>d.

- Using high-pressure streams (Relatence 6. p. VII-1-51 8). 1534-1537 USS Concept (ARG-22) placed a coarding
- teas on Hbird (Reference 5, p. V31-1) 68-31, trane 120, 7 to 6 R/24 houts, 30 August
- 0914-1027 Effective concerned any officers, two officers, nine emission een, and OSK boarding party boarded Rhind to determine the effects of lest BAKER: no significent dasage was discovered. Topoldo everyout 1.2 8774 Nours, Nigh 2.5 8726 hours: below decks swerage 0.5 8726 hours: below decks swerage 0.5 8726 hours, high 1.5 8724 bours.
  - 1015 a spectal annihing party cleared the ship.
- 12 August Populde average 1.1 2/24 taurs (Mefer enve 1).
- j3 jugust 6930-1630 "Atee sen aboard to pick up chronocaeter boxes and special radiological fills

badges and pills (sulfur isticts used to reasure radiation).

24 August 1700 - <u>Wujmi</u>te come and officere dopathed from

- Bikini en coure de Kwajajele socard Rockloghan.
- 28 August 1200 Decembras Looch
- 30 August Towed to Kwajaleth by 033 Sunjock (AN-80).
- 30 September: Topolde overlage 0.40 8726 Awars (Reter ence 7).

#### PROFESS NOT SALES FOR THE PROFESSION (CO. 18)

Erew Site, 234 Bikhai Atolik Atolikalı, 5 Juny 1946 Bikhai Atolik Atolikalı 5 Juny 1946 Shat Ablik Colation, 8 mai 175 km) 50 Shat BAtle Location, 16 mak (33 km) 50 Deconlaminalion Location: Potel Sound Deconlaminalion Location: Potel Sound Deconlaminalion Location: 19 Rovember 1945 Final Clearance, 4 January 1947

- Task Unit and Function The destroyer Pugtington was wrater of the 1-7 (Surface Patrol). Destroyer Division 72. Is had special radiological equipment for allow before its participation in the test series 14 look water samples and radiological readings outside the lagoon.
- Shok #881 [= 301y, 0900]

00 June

- EG20 Nembers of the trobalogical monitoring party reported abrand for temporary duty. E228 Underway.
- July Steaming 8 nml (\$5 km) southwest of setlace zero.
  - 0901 Left descelled danger section.
    - 0920 Changed course and speed to clear danger sector. 2220 Stories all Discloses to conduct esteri
  - 2220 Stopped all Dirgines Lo Conduct ester propodings.

2 July

- 334(0452) Stoppen all engines and tour pathytheram graph and radiological soundings.
- CB35-O536 All engines stopped to take water sam
- 5742-2010 All engines stopped to take water comples.
  - L226 Commenced extremely roinate staticn off Adviken Pass to conduct soundings.
     L256 Stopped akt engines and took station off
  - Adrikan Rasa.
  - 1535 Tool LOVP 10 Low.
  - 2100 Represented to Lake position off Aurikan East.
  - 2256 House to rear Addition Passy, conducting cationogical survey.
- 3 Subiy Took and along tas soundings in victories of Adelian Estend.

# USS Robert K. Huntington (80-781)

# USS Rockbridge (APA-228)

Sintuly Test	Andwised in secto 1416, biking	н.с	Antopored in Berlin Ast weather Briefman Arctif
8u!y 647:	Massaway ta shakari Nyfreuriyiti sashti Tayo	70 Angust Ding	traleparan (nom begins (186) was reason on National Habbert
A ST July	renducite ; ruus atigs :		2 <u>55 800(00891064 ;000 220)</u>
12 0.19 1279	And Survey ( project No., ( Associated on)	Tera Stan Stelen August	
12 July (214	Anch Geel (n. Sentin 200 - Sentin 200 - Senting) Obtrative Costrol Vestari.	Shot ASLU ve frat BAK:F t becartarings	(Ap42)ure (A) August (345) cathon (20 mm) (21 mm) (4) cgatfen (10 mm) (24 mm) (46) tem upgation (24 mm) (46) tem anne (5 Leventer (346)
1079 1073	Androsed in research 1988, Stears		rry. 13 December 1946
SADE BARER -:	95 (J.Y. 1835)	izar Marijan Trujen	d function ack stansport Recybridge was a meaker of
26 000y 1005 1290 2160	Sim cateological mentions reported alterd har responding duty. Underway lear bersh libb (Pikini, Singper all respines to be to vicinity as now Work, conferent of initial	One of the first the det tarkend there	1 (Texasport Entry, framsport Docutor Di- the Transport Oblics primary functions was a Larget SO() room during and following orstions. Crows of carget thips that were contract a behaviorable by the texts for itsling aboved to 1 Y () events often the orsticuties needed by the texts often the orsticuties needed by the texts.
25 July 210: 7305	Scale (c. creducted scholarys Comparant Commercal categoric country for to categorizations (study)	Srit (B ) Si Cone	
75 JULY 0760 0954	Snotped all environmentand took partyclects Graph providing. Atplicant of party 123, Santhi Java	0521 ( <i>4</i> 2.	Byanuared thems of tender ships 200 <u>At</u> Bangar too ABA logi Xee Yesh (Se AAs, and 200 Gait Lake Cing 200 PM rate atomic bi preparation for sour ABEF.
20 July (455 (6)5 (1973) (940) (255 (2500) 29 July	Unierway irwa beret 301. Shapyad ali ungawes te custori sowodingo. Ali ungbuda singyadi ta tradutingo. Satus. Howe to to contaut sauthings Taga paimytomomogi aph readings.	1 (19) Crito 1518 (745) (715) (715)	began standablocies inch minibe private ( (now barget varies) Undersay from horth 222, Bikani, for op- diation and horth 222, Bikani, for op- diation of the second Margaria Regar managering to curve Bis(n) op- tenter, weathing signal to enter. Andiered to betth Side added thing pro- second of an antibust operator.
0900) (100-0000)	<pre>oteamine; singly on cathological patch marth of Lottilk (sland stopping every hart (k.3 emp for Gelger H Les group and bathythermograph (wathras) terducted costdings.</pre>	A daty 1411 1 ×a daty	-Miltred anthorage to Sector VV Roug for activity for
9401	Stopped will suggest to contact radiology	-	- 2007 (no 2007) (no - 2017, 1945
2535 9518 0521	cal news of water. Execute frongs institutions (we still slick. Champed reactor to stear the weights with of the slice competend stearting to chirale outer comp	1 ( U2)) 1855-1623	FV-relation Arbankan, were york, and Saig Case Clay personal
C G 18	Apples of usingly to conjust radiancy celests of the water.	25 July 6000 (9.0	Koncluster, Ast Windle performent from top
026) 1100	Investigated Amm off siles of the estra Ammound in Seath 177 Histor	21.10 0725	ngel stulges, tendenskap login ten (* 224 Chland 10 (* 3 10 grade Maribers
2 Alguni 0159	Chalensay true besch 2365 th reliance 658 G Pigen Col 2244 as became encentre con	2535	- Studies of Herberger, Contractivet Augusting Station Received
0013	tic, vesadi koʻlarved Oʻzalymi	77 July 165 (440	Observation and minute performed of tar
(603 D. Konst	Angfworgeb an synthe Vigtor, Ulkani.		- gen stips (PSA Pricey)eurste (PA-DA) - DAS Senarogg (CV 97, USA Parise (SA DSA), USA Sytte (DSA Frit, and gen hjitster (DSA Sti
5 Kayyust 0747	Underway for firth a fight.		to exists that come as as a sure
1924-1513	Singaged is firing sessio		percit.

#### USS Rockbridge (APA-228) 27 3017

1-1-1-1	Received in chartey of Ockers Woll.	0943	Gabtistien Cloc with
29 July	and a data database Musical	1744	Youbsted .
0430	ascholed in Derth Rog, Pikipi	3 July	
1205	Cert inducating trace both Reg to incidence as with 15 . 3.	2 July 1407	shi fixed to
1056	Second to 1.1 an area Margan.	1540	01sesbarke
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30 JUIY			
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2 Anglasi 1512	settied to Sectivity?		4000014961
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	wares mate (p. 14) comparisoned respective period	1110	Forgarencied
	some such pacifielty and use bunks in the		<ul> <li>To Penparo</li> </ul>
	vicinity when theread as a salety plucau	1045	Completed
	control expression spaces at below for		Facqui al
	eranne vzoepa caadensere poobers, which registered Dush e/24 courst atea atound		(APA 220)
	soudensate coefficies faile for i nour moth	:948	Competence
	ing period per day, Other sparre, theped		secta.
	red were found tree of cadination bearings.		
		10 մանջ	
43 (Area)(5)		9847	Under way il
1100	Received target ship USA Omeson (APA PA)	3565	Art. Jacobski 💡
	personae: from USS Hearico (APA-45)		
1970	Reveloped target with 038 Brackers (ARX 640	16 Juny	
1730	personal from Pegalua. Pergul Phip uSS Logyngham (06 15) per	0960-1545	Yebar ked
1/10	somet came atwards for Lefthing and cub	21 July	Goto.
	ASSAULT COMPANY AND	,256 1810	setio; kristi j
		1.11	rei.
44-22 August	Routine attivities.		
51 B	Parks a survey of any second at the second	Shot PARIN ()	27 inlà <sup>1</sup> 30.
23 August	Saderway for AwajelySa.	24 July	
74 Microsoft		0421	Construct
\$2,1	Anchored to protect UK, Keepalesh,		re; for a
			from Peos
29 August		9530	Loderwsy 1
1551	Dedroway for investing dom		
		25 JURY	
	USS ROCKINGHAN (RPA-229)	cesa	Secured 1
	OSS NOCKINGING LANGE (79)		y regal ( til Bern
Cre- 5776: 3	297	et July	
Steen Stall	-	9414	Brought a
21kkni Alvili	Geeditore 24 August 1946		Discoid and
Shel J&.L Le:	telton, of net (12 ter)tel telton 29 ment (12 ment)t5i		secola (i)
Shot SAKIP LA	(alten 29 mm) (17 mm) (51	ylut. Df	
	Ion (org)'ear (An Franchica)	\$102	Anthosed I
	(levrunde – 4 Geolember 1996) Ale – 18 Gelember 1946	I Boom of	
- 1001 (16015	10 L4(C=1)/ 1940	<ol> <li>Maquet 3145, 1530</li> </ol>	Teos es a
Real User and	10071100		101945 SH
	ack counsions workingham was a womber of		Rhand LDD
	. (Transport John), transport Division 41.		
Quer - 01	ние Тараррен (Макто реликку бужаторы мас -	2 Augusti	
	<ul> <li>(arge) ship crows doring and following</li> </ul>	1670	pointed an
	politions. Come of the integer chips that	21.59	Seconded
	ck of reddered onlobeditable by the tests - ed theing abound TV) : vestels after the -	A Lances	
	na inving abound no lub s vestmis accor the toma polymous tradicterized in pitera ships	t Augest 0955	Received
54-1 141 A.			Eugen: Sta
Shel KSLL []	April (1990)		
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		Line Modernia	
8 Jany 0819	Scenaring in arms Macmon. Sci material Coopation Appr.	4613-1110	f≢barked ; get sbip∧

safery precautions in conveи блад in twich 316, 91kton. o wrwtholiage benibe 210. ed Team & Foot target whip Pring ea terour vessel pessonnel and to un alongside catger while USS. 108 241ungside <u>Permacgia</u> 16 bernt 286. biralshing satisated services da. intransfer of all personnel of 1.1p Negator (is 1922) Rockberdige famo-bling electricity to Feairos a longožde Seusaçoja 0.17(10.285. principality and backprice from Ma Print English Constants and person 14 L ensareing Latget versel personwot PEAKE. Including perported scola. tion Plaint. tom general quarters and set WERE Floor, sheet the chip. coate our afflices and als ear n. Tast-pincte personnel of Peaof LSS George Clyman, (ASA J7). in Seach 240, BilkSeil, lsefind cynhys and geoscanant (mes Mps 1953 Nachwes (Di 41,0), 1983 1-464), and USŞ Stack (Nu 406), nchorage to besch 353. a clicking IC■. entities personnel from Prinz. ork and Chirol. entitement and traggage travelor USS Carron (#P& 7.) and USS

Ra (25 TA (62) 100 5905.

# US<u>S Rockingham</u> (APA-229)

# USS Rockwall (APA-230)

(5 Mgy 205 25)5-16(5	Plantarget 27107 Exect personnel to co-	: 350 : #28	Tesm W form Sgraings Commind. Shifted to pott. 221
	Fathed ranges whip bud Blades Ark C31.	) July	
10 August			Blastinsked 262 enligted men en Sajaroga.
680% 0931	fülgenbarked Prinz suger perskarel to	. 559	Discubatived 2 officers and 16 entroped
	Hlader.		men to Secaloge, 44 enlisted two to 197
			135. અર્થ 25 સ્વીજ્સમાં અન્ય 16 ( <u>ક</u> દ્દ-52
18 Anguse 0866 1.30	obstituted same why personal to the	17 July	
1010 1.12	Fortiwa, (ABA-200) Total discharged: 94	:/	185 545 tame glongslev
	whilsted who decay beind, do entitled men	10.52	LSF-545 TASE aff.
	lice Mark, and it.E will steel with those		
	Pengasaria	Chi Cally	
: / \$0	Transferond 35 Carron personnel to City	0Å35	Target wase. (1-111) ecosed alongside
	Set.	1640	LCE ILES Last off.
2445	transferred 26 penagogia personel to		
	Cayner	(0-2) (uly	Routine activities.
23 Magane	Sive enlished were early cransferred from	SHER BRACK (	(25 J.1 <sub>2</sub> , CB)5)
	Hughra. Rogad, waa faiboj sa USS Syl-		
	VOT(1 (RKA 64)	24 Culy	
		1390	Completed embaraing 412 emilisted men and
24 Burgard			official of the target stips for most
3000	Yrdermay too Keeja ete	14.45	нимпен Истонички россился но соля в си или , еб
25 August			where any period is the constant of the state
\$220	Antipored to been but weighteen Atoli	25 July	
		eef o	Conversed stearing to juin CTA
29 August		05:4	loaned 176 (.).
3568	tederway (og Pear) Harbor.	·	
		it Ju∶γ	<ul> <li>Stearing in Kungany With TU (.) . In ereal Marwon.</li> </ul>
	USS ROCEWALL (APR-730)		
		27 Juny	
Erew Silte - 2		3356	<ul> <li>Disputched FAVE But 15 to Receipting og so</li> </ul>
	Annihulin in June 1946		plok we d officers and 11 entitled end
	Departure 18 August 1946	1.4	trom Sec <u>as</u> oqa.
	gelen - 22 n.st (143 man) 150: Gattigen - 55 man) (30 mm - ba	495	<ul> <li>Completed which is passingly a and high which is an an an an an and an /li></ul>
	on Localian: San Franciscu		213504. (C1) WC. ().
	learance. 17 December 946	20 JL19	
the Operation	ter 20 Greenary 1946	0634	And bared by the US 200, Biking.
1	1	3 4	
The Arc	ack transport Rockwali was a mersher of CJ − ack transport Rockwali	2 August 1495	Staffed anchorage to beach 352
	roospace Unite. Traceport Conteins 11. One		w selve and ovage of below sos
	Transport Otit's primary functions was to	O Recust	
	inget when clears during and following the	0201	Received (5 enlocted men from sarges resp.
	oas time of the heiger ships that were		(25 Arignsis (BD i))
	contered uninhebinaply by the firsts con-		
	stying aboase the solid vessess also the	B August	we also different and all solutions
dest open the	-10:N .	0625	Mecalized h officers and 132 enlisted set from target ship 353 <u>Austo</u> rd (ND 989).
Shot Adul (4	Sufr. 09001		the conduction for the map of THE COLOR OF SEA (
<b></b>		10 Magest	
10 0 ane		ก้อาสุ	Transferred & officers and UNC entities
4015-0425	Empacked officers and enfisted cen from		men de Mackbelige.
	target shaps ( <u>as Saratoya</u> (LV-3), <u>Ltb.</u>	• • • • • • •	
	Independence (CVI, 221, 353 ( <u>157</u> ), <u>187</u> LST (1), Con <u>197</u> (220, 363 ( <u>157</u> ), and	12 August 1946	francheron: 26 officers and 017 er-Astes
	1932 (1911 - 193 <u>3 - 19</u> 37 - 1939 - 193		Men of Independence to USS_Ajax (AR-6).
8450	Underway for area Marmon		in the second
		19 August	
ե մանդր	Steamed to Kompany With (2010-31) 1986	1905	sugent-error of officers and 122 enclosed
	USS George Ulghes (APA 22) and USS Reck		
1722	bringe (APA 2233) in azwa Maaroo. Ancogred yn Rikoni Aroli in berth 1.4.	Iaugusi 94	
		2900	Degan diskribanking 157,52 onew to 245
2 10.27			Dirje (AL-14).
iose –	Telse Al Farm Sataroga Reparted.	1554	Ordning for Pearl Parbos

	US <u>S ROLETTE</u> (AKA-94)	2 August LoSC	Shifted to berch )79. Bikink.
Crew Star	15;	1000	SHEEPS TO DETEN 319. BICHTE.
81k101 MLOTI	Arrivel: 20 March 1946 Departure: 26 August 1946 Welton: 27 Not (50 Km) (40	7 August (453	Shifted to berch 550.
Sho1 8ARL9 ei	ncarlon, 74 mm² (45 km²)4 Ion latalico, San Diego	8-20 August	Routine accivities.
Operational I	(Aestance: 28 January 1941 Nee – 1 FeSruary 1943	27 August 6815 0940	Sedicale personal aboard to determine reduced total jevel epoch whip.
3.3.1 i 31. R <u>o</u> j ⊌1th co	g Function act cargo ship <u>Holeton</u> was a member of TO Transport Unity. Transportation Division with and <u>LSS O</u> llars (ARA-101) were loaded instruction material at Port Husness, Calif- and walled with 200 Scalada, for Riking op	2) August  D45	Mituen eoligiet was from USS (Sf 8)7 reported aboard for transportation to Enswerak.
bacsacks	. After arciving at Bikini, they served as 5 and moterial stores ships for the Seabers nor 6. p. VII-C-20-RJ. Rejecte was ini-	26 August 1626	Understay for Stowetaw.
tialiy wa⊭n <u>Ho</u>	designated as an intrateausit Caego ship: Setta Zett after HAKER, USS sylvania INKA K ovar handilog inicationalit teelght Uket	77 Xuqusi 100V	Anchored at Energies.
Ctwnce (	5. p. V[[ 1-60 Å].	79 Xuqust	
Sho: ACLE (1	Suly, 0900)	1500	Give officer and fourthes emissed pen- boarded for transportation to Port Rue neme. California.
10 June 1923	Opderway from optim (A bisint, in ac- condence with CJTP ( Cp Bisn (-46 for JREE day exercises.	30 August 1 <i>92</i> 9	Undermay for Fort Rueneze, California.
6130	Published special ABLE day safety pre- cautions.	13 September 0950	Movend to plot 2. Part Movement Califing
1900 1900	Anthored in berth 375. Bikini		
2 July			USS SALOOR (SVE-211)
1442	Shifted to besch 18. Bikint.	Crew Stue E Bhaint Aicil	854 Ar:1va]- 24 May 1966
• July	Shifted to beath 50%.	Similah Miadi	Departure: 4 August (946 Calton: 30 mm1 (56 km) W
5-23 July	Routine activities.	Smot BiseR Localion: 15 mml (28 km) ME Decontaminution (craiton, San Diego	
Shot BAKIA (2	15 July, 0814)	Operational 1	Leanance: 20 January 1947 Nee. I February 1947
γنیز 24 8638	Underway in actordance with CJTM J Oper Allon Plan 3 46 for HAMEH day operations.	last Conte and <u>Saig</u> or,	, 
25 July 0971	Venneedind to Anajalett	to ≯tel escenic t	in comes and prepare equipment for the comes and prepare equipment for the comes tests: to conduct photographic opera- cometate helicopter airctaft for radiating
26 JU1Y 1276	Anchoses in perch 27. Reajuledo.	<pre>(a) twicking test nutropy and the set (a) twicking test of short strategy, and photogy utility flights on short days; to provide all control of drove boars, to catty out all.</pre>	
27 July 1355	Anderway for Mikana Atobi-	and ethe	on embarried units; and to provide exposing on phonography before and after the shors (son G <u>argo)</u> carried a complete extrological
28 July 9826 13%0	Anchored to betth 8. Bisini Underway for Pongaiap Atoli.	ence 6.	at took upper wind radar neadings (Peter p. VII-70-01.
29 2014		Shol ABLE (1	Jvr1y, (*9.30.)
0557	Anthored to berth 27, Rongelap Ato31,	3 3048	Steaming in Company with plane grand de- strongers UNS Newson K. Persy (20-880) and
30 July 1610	Two civilians and 70 entireed men re- posted abund for duty with 5364 Soval Construction Patrailon.	0708-1130 1250 1257 1630-1330	USS Fyrse (20 682) in area Palge. Conducted Elight Operations. Conducted Elight operations. Conducted Elight operations.
1633	Underway (or Bikin) from Rocy#lap.	5900	Anchered in Derth 285, BJAIni.
91 July 0650	Anchored in Worth S64, Risini Acoli.	2 Judy E216	Shifted to beach 34.

# USS Saldor (CVE-117)

# USS Saint Croix (APA-231)

5 -8119 0 125 1905	Underway Eas blight operations. Anthonait (o besin 24, Biskot,	C 24-403	Will Figl Al. It also bousht ranges ship turing and following the descentions (4 as the Chewlar evacuation ship during
11-125(A 2096	underwisy were Awrey and Pogan in area Panges	3ho: 3514 :	200g, 0900g
		30 Com	
14 Coly 1497	Anonymed to twenty 34 - Dicking About	1992	(vierway from besth 92, D)vin) inlend
		a Daiy	-treated as part of Treatsport Dawlston 4
	S 5.15. 05051		of 75 5 Diopetations in early Museon.
24 (e)y 0927	Oblighting the second data whet the Adfile is reported	143.	<ul> <li>Special Instructions were read to purchase with the calety plan for ABUR days.</li> </ul>
1.114	eton Plan I to. Destroyets Parse and Every In plane quart	1045	Renouvering to brin survivi of TO 1.1 log- monthy foto stea 6.
	positions while they are investigated all grants	1.41	Are noted in Deilo JJ7, JUND
		2 /019	
25 July		25.4	Whether, Steaking on earlous Araquit and
6652 0110 1843 (47)	auxyline the first of the second blands	16.1	sg≕näs kolonofure väsä äle näärnet Andhorud koloestä äzt
	Fonducied (15gh: operations) Confuented (Index operations)	30; :	Androset in Desta 92.
1.0100442	Londae des Fleisges lager a longe : Londae est lintate lager as (ons).	14 July	
474; 19:0	Tomda izvi ( ighi kepungtinuk.	1012 (124	integer weeken it? If himskind strautde
	and the second		to unitad boxed amountion.
26 3519 1115	∎o Secret (o Secto E, Miki 1 Atel	(254),458	
1250	Underway for first operations		
-		27 0429	
a franky		1405 (415	
(\$5.5	Anthored in Sections, Olegan Radius		liansfer unertr 3omb tess taterte,
1602	Underway from Bakir:	(9 Jały	
29 July		.9 cd.y .5%	- Orderway (not pix(of Abo)) to travetae
844H 8300	Anchered in berth (48, 8050) Ut legeny (12, Residente,		island.
		19 July	
ي برامن در		1922	Anthored By Durch R.Z. Phowerner Influes
1691	Anchored as Keajalean Atoulo		
6602	Wederway for Bustry Atril	ZI COLY	Ladaren den anderen av 11. de meteren
Si July		14.12	<ul> <li>Underway the manyates attain to service with an additional and the service and the service attained and</li> </ul>
0841	Anchored on Six Orl Hasbor (c. becch 04		evacuations from Science and Los Annotations and
2 August		7 ( 260)y	
. 597	Utilized to beaut that the t	. 64. 7	Wrope-d in Kwajalaya Hostor in schooler
4.3.9%		.AL>	- patient to maval historical. - Quightwoy (rot Mwajaletto en courte co-
1078	enderway for Pearl Pactor		Meguro Ascil.
9 Magust	manifold in short P. I. should be and instead	SHOT BARIE A	25 (un+1 092))
[31]	Reeled to their Fill yord twiaid, Oatea.	24 T.Jy	
		414	Rochward en Majoro
	4765-444, X1040 (AVA-201)	- •	
	,	20.2019	
Unew Street		.6%1	Departed for Kommercul Akol, which per
	Jerkap's Sillaret		romanic evacuated from Encounter as pass
	Beparture 2 August 1948		Section 2.
	agthan – 15 mm' (h' km) (¶) Stathon: −450 mm' (874 mm), at Majuro Ato'' –	21 J 319	
	nun unathor. Sun Dinge	9777	Anchured by betty Karley Horneyton,
	Teatarter 27 November 1946	.220	Completed Attack-acking will Insertion Attack
	nee 12 January 1987		evec ant.
	•	1597	intelecence ender moneytick by hikited wheely.
lase bote and			
	enk fransport Critis Drokk wey a active of	24 10.4	
	<ol> <li>Teansport Units: TeanSport Divisition 33.</li> <li>Teansport Divisition Science Contemportant</li> </ol>	2916	<ul> <li>Took pestator, astribute to TG (10 env) of the Pestator</li> </ul>
	tion test mentes begant B <u>ai</u> rt Crubig placed - g i Gegteen kurvery gantyk Graboe retuipment		Sovert Mioli.
	trafe, and perroleum products. When 14	22 6419	
at Civer.	in Right was performed proceeds when the	0640	Anchored in brich 108, Biking,
	) quarters thip for the tenders. (Asterson		

#### USS Saint Croix (APA-231) 30 July

- 2020 (a compequation white COTP | dispatch, conplotted autisting tog: grone breats (LCVPS). and mixed larver, pyectechnics and bout sparses on bound for tilt to San Diego Callioteta.
- 2.000000 1.155 Orderway tree Sikbai Aroll to Can Fousichico via Reall Hatbor and San Diruo with 25 Navy officers. I Marine afficer. 2 Army officers. 473 Mavy englision Man. 33 Harine emlisted were and 24 Avery emlisted the with Excellence diese that unit and other equiperint as cargo.

Regist

Menoing to bestly & A. Death Marbor. 15ce

#### CANADA

Crea Style ... PAS

- Eheln: Acol: Krylval. 25 April 1986 Come Location for Shoa A&F: USS Reckingham (474-779) Drew Location for Shoa BARIR - Virious shous
- Shot ABit nevalion 420 yards (204 meters) L Date and Foration Senal: 2 July 1945, Blanch (Agous)
- Task Unit and Surchites The coplated Japanese light cruiser Gakawa was a moment of to 1.21 (passbeaming and Cruiser Unor). Cruiser Division VI. It was a target ship and Conk an a result of shot APLE. It's CPOSSSOADS offer, cupprised of file preserved, was evacuated before ABLC .
- Shor ABri (1 July, C900)

5.2

1 July 1856

- FIGTE I officerized Sacong to be reved to a beith for hidly demoded ships as seen as nate and president. Sagage was beening alt and was until in a redicative area. DATE: CHG 1 2 coported to CUTY 1 that prospects Lot getting Sevene out of the array that day were very poor because repairs on the ratiological situation were sites coming
- < 201Y
  - ĎR ± F 155 Actionary 1857-1461 underway with walk used ATTICAT to board Galama.
  - Sakaya was striking by the stern and besh 0642 (HI ATL: the all sixtion was not cadio. logically sets.
  - C901 Actionant laying alongslife bakawate post where he working party in Sakawa
  - 59864 ebacding party required to Achoesel. makines factorically areafet. Actioned CONTRACT AND A
  - 0927 Actorawit approached Cakewo on the stat board side.
  - £90D Hoazdling pretty from Anhowaws on Sakawa
  - A(90 Boarding party cetucoed to Achonich.
  - Achomenal attempted to take Saleson in tow. 3941 1025
  - 1550 Hughalmer (ANN 02) raited linkawa (154 ing heavily to post and setaling by irs steen. StaticAting samplesdipat (looding of the attain portion of the ship. The after part of the ship was not radio)ogically into prompt to place a selvage party about to otherwise purpling operatons. Achomana due chabo estaching Cakawa ka maarang buay.

#### USS Salt Lake City (CA-25)

- 10.34 List increased sharply.
- 1635 Mato seck post weach to about the centre. of ballage.
- Salpha's att heloge desarpeated. 1037
- hehoment reported Sakawa in row but sink-1638 Ing.
- Bayawa search store these eleverity 40 leaves types new stuck car of water. Keve our 1632 alwood 30. Mt 1061 Advant 20 Franks showing forward practoard wide.
- Rolema san's verticative it did not slide 1663 in Art.
- Achievant out now lithe to Sakewa. 1142
- (14) Actors of proceeded to be the  $\overline{G}_{+}$

Sature 5 crewings dispersed to join the reveal of warf DUA Ranget Vesspin.

#### HSS SALT LARE (114 (CA-25)

Grand Share -335 Battan Mto'l Arrival: 29 May 1946 Histor Atoll Departure: 23 August 1986 Grew Location for Smol ASLE USS Pocksringer (APA-328) Grew Location for Smol ASLE USS Pocksringer Smot ABLE Location - B95 yands (P12 parts) SF Smot daal2 (coation - 1,220 yands (1.6 km) 6ML Recontractuation receives. Received assumption Such 25 May 1940, off the southern California could

fave loss and lunction The beauty conjugate Solf lysts  $\operatorname{CR}_{\Sigma}$  was a member of To 1.2.2 (Bartinsbip and Coulser Unit), Coulset Sivision 23. It was a tablet ship for CROSSROMA. List of the way mean unless the follow event, should

Shot Asti in July, OSHOT

and theme

1000-0314 Reindated crew to Rochboldge in prepara FLOO FOR ANDE.

Z Je19

- 1.110 the comparison officer and 30 mes or-Suprime the fully with a second could be the second of the second above the sails deri-
  - 1600 Commissed survey of second deck :610 The commanding officer and boarding teen. evacuated the ship for the dish.

ALC F

0810 1040 The commenting officer and a boarding team of MD men with reducte executed in boauted the thip and continued clearing lower duck rempertments. Concluted radioregional directance of entities ships wet creatition 2010 n below the second docs, and evenuated the ship for the highr.

4 July

The companying officer and a boarding ream of 100 men reboarded the antp and 0805 (670) continued clearing sybrin. All personnel returned to Recipcion for the elubit.

5 JULY

G800 (615) The communications of the and a boardary Least of 150 ment beauted to continue inspection of the ship and clear many debits. All polanical encept a secondary

#### <u>USS Salt Lake City</u> (CA-25) 5 July

defections (9 more grow 2 b) terrors deposited ter the signal

- A cuty Section Trease A and A. consisting of 150 ten. and the comparating of these builded A: contained frequencies of the shop and clear every tention. Official underway to activities assisted by ATR-AD
  - Dist underway to anotherappe, and underway to anotherappe, and used in variables of becall (a).
     Anotherap in variables of becall (a).
  - 1543 The commencing objices and rearding seam departed for Kombininge, except for the secondry pathol.
- 1 Joby 0917 (145) All permanent three forces from 2...kbot-lege to Sever Water City.
- Shot added you byly: cable
- 21 Josep 2920 reachterned VV Let is Booktajögg in erei periotion fon dest OKXEX.
- 24 Duly Development (versionary officers and = lineed mento for Focks lings.
- 21 July 0944 (RSS Regington (RSS 12) proved (A): Later alignations to starboard, ressing Inditated Discustoriation at about 01 feature (0.1 metrica).
- 28 July 1983 – Reclarment pasted Lajo Joke Jory, wholf was down by the stere and lighting to starioard.
- 27 Juny 1907 – Regiajmeny portant altergalan Sylf <u>La</u>rcy City We manye in States tith. Dré Bont Calestane de Abig Alter Four Folgaret Sa adjaret water.
- \$1 July
  - 1015 COS Clamp (Aks 30) directed to proped to Split Loky (Lity and work that with high pressure buses for a fours
  - 1146 Cimple reported mentions advised there re matering so withokey at Sale Lake Cing for more share i from way stands.
  - 1450 US Conserver (440 MM H)socket in pronand to Sels bake City, plane - siter on possibly mass Catger readings, replacibly dom supply, and requer to previous as ebgraphic.
  - 1521 Consequent reported hearding of high loge City insplated.
  - 1652 Conserves Descented SATE Lake STY to their toat on rouse to another set.
- 1. Angust
  - 1920 Special boarding teat of about 15 Men reported to Stand Schwerver for rebeard bog Swin Lako Litry (approve mound allogation Calling gas
  - 2000 Conserver movied acception CS1 time City a period a Comparison CS1 time went on leaved to style performs the filled spaces for perping ther out other patties were sold onboard to wash down the main were order with high pressure from a careful worded was kern of the reposate.

### USS\_Salt\_Lake\_City (CA-25)

(a) mayo man on equivalent botty no precisions has 'some non-block that the national botty relevant the taurding tent was on board for approximately 6 is been.

- - DH45 (NCC diorgence) movines alongside (air Lase City's parcented to continue pumping out flonder spaces. Western down torgestle with botter cospound and the solution and cleared radiusation places of setal on the gook. A nameful second was high it worth man's exponent of radiation. Conserver cast sif from alongside at the red of the day's uprestions.
- 2 Asyabl 1907 The somranding officer and a boarding tain of 60 mer duarded field (gave Offic from 1/07% and began decontamination work with assign admitting and sold. No effect cleaning raterials were available "Refecaria to: Commond rudiological server of the weather deck
  - 1000 The second test beacted the ship and continged simplying down with any and conting dynamic reasonst so receiving where all were ware thereof for radiologic call connected tert.
  - 1920 When succeed terms retrieved to Reputylogy where all terms whe checkes for cadfology rai concentration. Forecastly shaded as reduced to 1 K224 tonys with steel each ubout 0.5 F/26 bours (Reference 42).
- 4 Avegret 0705 The commandating officer and the first is anding fear of 50 een boarded by Eleaky City and satisfied screen containers to use insighter of Longastic with very of the ship. House the Longastic with very college Flucture bighty publics taken level, consummation bighty publics taken level, consummation deck, and eatile call deck. Open bridge and pilot house cellined from 1. H/24 nouts to 4 Print cours average without the same deates and publies your bight contings. The eater was conved later Openance 41.
  - 2933 Presteater on the whip was declared rabiologicative safe for deleving.
  - (10) Centers' Mandada, Leak reported in Kord and Cost(meet decorrelination Flash boarding toot contened to Ryck<u>b</u>endge Whete they were charked for yould'sglobil contentration.
  - .303 The suited boarding seam reported to search and (doubled) described for The Second seam resulted to Pockszidge where all new write theorem for redshappen, contraduation.

#### <u>USS Sait Lake City</u> (CA-25) 4 August

USS Salt Lake City (CA-25)

1500 The third boarding party evecusied Sout Lake City and recorded to <u>Pockbridge</u> where all mentione (LACKAR for addation): call contempration.

5 August

- 0500 Special party on board to place diesel generators.
- 0910 The commendancy off-form and a symplet bearding user of 50 web boarded and commenced cleaning rephinery spaces and togsifier individual contactedition. Commented deliv collogical survey of the share.
- ship. 39% Second poarding twas reported steard to politive the first seam
- 3.10 First boarding test retarned to Socibrodge whete all free were sheaked for radiological course[ref]er.
- 1.800 Thind boarding seas reported on board to teldaus the second tent.
- 3315 Second boarding rear returned to Ruck bridge where all wer where checked for radiologics? contamination
- (400 third avail enterned to Recenting where all was were sheaked for autoinateal containation.

a complete survey was begun and centings of representasive areas were recorded, such day the same routine was fullowed and readings treasided to determine changes. Each day one has epistimere discovered that were only previously known to evist. Every effort was made to previously known to evist. Every effort was made to previously known to evist. Every effort was made to previously known to evist. Every effort was made to previously known to evist. Every effort was made to sublation receasion. In was found memory to continue reprint anyone from receiving hole that the ustabilities and nonlinually short precatifices to be taken erough reflective areas. Some men were still beach handling debits with base hands' although rubber glows were available. Here were worked in groups with one party officet for every fine on the were difference for.

5 August A strong actic actic solution was applied to a deck aces on the open bridge to determine the value of actd for derostami nation. The d fr<sup>2</sup> area was structured for 5 minutes after actinistic applied and these Hurzied off. A control size the same size was scutted for 5 minutes eachly only betteder. Notic green endered by particular, the same amount (1.5 M/24 nours to 0.1 M/24 (second Reference 4).

> The work pairies cleared away wood gaulugs, bording, and other debris from operbaidge, sciubbed the derk, and washed to down. Fluched down well derk, after superstructure deck, and wash deck aft. So could's cleaning materials were avail able. Average readings on bridge and pllot double computerion deck to about 2 M/24 hears.

A August

(910 1510 Three parties of 50 mex each in 2 hour relays boarded (Reference 6). At the end of each petrod aboard <u>Apit Lang Dity</u>, wen returned to Rockboldge and were checked for cathological conseination. A strong returned to Rockbologic and were checked for cathological conseination. A strong returner of bydrocologic acid was applied to a stmel plate and scrubbed for several micenes, then flushed off, Na control area was used but the results were very peaking the state of the scents acid. Spaged lye colution on multipacts and deck of open bridge, pilot house level turner No. 1. researcherics deck, and forelactie deck. Simbled off lye colution atter scrubbing with deck usrubbers, removing several coars of pairs from gatrice satisfies Austings generally redeced 10 to 15 percent on wooden deck: gatried surfaces reduced 25 to 35 per rens Removed vent cover portside, frame 500 estim deck Reading outlide was 60 Reide burds, surdary inside was 100 R/26 Dours, Flughed Gat west with base, readong reduces to 8 R/24 hours, fReter ence 41.

7 Magasi

3925 [109] Shace periods of 50 men each in 2 hour relays bolinder. When the parties relation to Sockbridge, all was write theoked for antialogical containing on.

> Molysroned wath eack from forecastle to we'll derit. Sprayed Bye solution on balkheads from turket Ma. 1 to the well deck. ices electric power at 1400. Unable to Mash down skitubbed decks. Cleaned out contentineted seatgepers and canvas from wing minutes frame 60. Readings reduced troe 48 9/24 bours on 4 R/24 hours. Cleared our debrik from specific-ket and Flushed it out. Peaking reduced from 32 \$774 Yours to 10 \$724 hours waxness. with About 5 R/24 hours evenuoe. A phece of wood Orck was remayed from the west dect stree measuring the collection of the aces. The section was then brought to Porkbridge and glaned down with a joiner. machine by 2/16 sort cuts. 5/16 Inch was removed to bring the wood to tolurance. (keletence 4).

8 Negati Begat moarting with two partypes of 80 data each 34 ) four teleys to tedeper time lost in changing work parties. All sen were chanked for reductogical contextration when they teruthed to Porkbridge.

> Forpheted fluching local paint from areas where Solution was applied the provisor day. The Buildon Hed to be reapplied to renove the paint. All buildness and the return the forward hell of the ship had the colories applied that day. Contented workying and theshing of buildnesses workying and theshing of buildness an after superstructure dock. Considerably Swint was removed, although reduction in general radiation was about 10 process. Where paint collected in publies around drains an communication deck, teading increased from Lin to 5 M/28 hours. Bud dies were removed (Betweener 41.

9 August, Two swrites of 80 men each in 5 hour each lays boarded. All each were theories for sadialogical contaminants when they returned to knowledged.

> Pressved Angleaktics debits from alles Seat(hitght platform, Removed pockets of andhoactive sand and debits in astplane draw singular and around structure be hind the after stack. Removed plant with lye Solution 4:om turnet Max. 3 and 4.

#### <u>USS Salt Lake City</u> (CA 25) 9 August

Secondary count sinurities and gun Sideld on after supernotamente denic, slight coduction in radiation appenent, attos co a complete valvey eac our made after completion of exist.

Said jewe  $\underline{C}(t)$  was not mainted again for the regular data strong randomized and mainted (Reference dy gota: further orders

12 Magase DRAD: Several devolutions of the Machania Severa reprised on board and checked of inte Using that this gene work by may Morphics on Soil Lake City.

> An process of contributing and when store contrastic were collected and large disguard of by brying at sea to wraghted bundles. Sleven mer sett untre samplet to Haven for cartilecteal analysis.

- August 2600 Mous per sent to traven to travel astresamples.
- Project
   OB10 Executive officer and 10 officers and entitled set tourded to borne to port inches.
   200 All personnel evenuated the shap.
- 20 August 1920 - Calt Cake Chty Indonesy Son Mesonik 11 nee by 1926 (Syn Kasae Cath Sh-
- 24 August 0017 - We haved th betth take 11, Keajateth.
- 78 August Decemenasioned

Sati (inter-Component recoiling VSD Takeshow (ATF (th) and CoG H(tette) satisfies) to proper Squad parall Shippard attributed there at July 1967, is was used for the visual transformation and remoted.

#### USS SAM MARCOS (LSO 255

Crew Sire 157 Birbon atoli Kulivali 19 March 1945 Sikhni Aloli Beparlare, 18 Magudi 1946 Shot KRUT Holathon: 20 Meri (52 Mm) ki Shot Seet Alocathon 10 Meri (53 Mm) ME Denoitari halion Locathon San Indeolice Uperational Crearatic 24 Cutobol 1946 Lines Utearatic 16 January 1947

Lask unit and function The dock landing ship Can Rendus was a member of the LBLB totains of Poat and Boar Pool Unit. It brought to the totains area a large number of small crait for the Even Area a large number float unit, portoon causeways and a sample with an 80 transport. Its main function Guileg the test with to provide small brack for dispatch and swill carried when.

Shot ABIE [1 July: D9035]

10 June (608 stoderway for assigned area off Pikin' stoll.

1 Coly	
1428	And herbed the Andrew Mail Hageged
$2 \cdot 21 \cdot 2n (\gamma)$	Roat four space of Jones,
JPD1 BRALN I	26 (c) <sub>11</sub> (535)
se duby	
-544	<ul> <li>Inconvey so authorized towall off filtent Accel an inconformance with cliffs. For text Max-Br.</li> </ul>
28 (Alig	
010:	- Secondry in column 54 area Packard with other vescels of TO 1.8
0955	Operating with 76 (1) to area Granam.
1455	Reclared to lance to by Biking Wool,
28 July (13)	huber and the second
Le sh	Districtionary for several terms of the several sector of the several sector of the se
16.00	Supering Independently in anna Methody with USS Cluberland Sound (Av. 17).
We doing	
1630	Ancheckel 5(C yards (45) motors) while of morth G. Bikken Atol].
A Daily	
3575	1515566 and Morage to Bersh 94. Ankle'
1 Autor	
1071	Solfoed meets to anchurage to beach Table, DVGCC
2 24 August	Recalled unclusives as Publick and Required to rout the small boot consistent.
In August	
1630	Didesway Las Kwitalete
26 Marriss	
** ***	

(13%) Rentweed (), 200 hours, 6 Sciences, 7 Sciences,

#### USS SARATOGA (CN+3)

LARM Shiph 1999 Binner Atolic Antonal - Li May 1945 Snew Las Lilan for Shoi 1911 - 35 Accemtia (APA VV) Snew Jac Alice for Shoi 38414 - Spickwell Show Alice Journey - 2,250 years (121 km; 5) Shot 34675 Lasation - 255 years (1220 melors) SSM Such 24 Duly 1465, sikini Jugoon

- Task John and Lunction The kapiter Cupatoga eta k Herajen; of 12 (2.2) Alectatt Cartier Chits Carrier Division State Has a parameter Antis Cartier Division State Has even based before ABAS and Bargs and ded concetters. Aparts to coper(metal explained Aba) were foothing and lood provided by the guarder makers Ghit, and are not separateous we toes toe Army Sognal Cont.
- JE-8 A815 01 1034, 09010

F. Jana

- 2952-1120 Readoated miller to Rockwall in preparation. Box 2005
- : July |022 - Klown(dentry |Sne was potentian Caratings S |11ght data :Reference 6, p. 402 ; 6 Al.

- 1369 \$79 40 ordered to taght the little on Sara tregal but not to beard ball
- 1409-1432 ATH 40 alongside Salatoga Lo flight tite. reported fire extragolated (Reference 6. pp VLF 2 9-4 and V21 F-ED-43.
  - she shakamayon (An RR) steam B) reported. 1539 playing a boarding leas on Services.
  - Shakemaxon reported Setatogia steet for sparatogi (Reference 6. g. VL2-[-32.k). 1530 Shekamason reported Cataloga radiractive. 1.305
  - trane 30 atr. Shakeening supersed ins disspection of 2115
  - Secologie with completed.
  - Shakamaxon seported parts of Garatinga radioactive under the tanght Geck to the 2100 waterline pociside (nome 90 to tuntal); recommended no true board until 2 July.

2 Gally

393N Shakan soon Reported Sanatings Groups, weret (Reference 5, p. VII 3 24 A).

The only evidence of appreciable reduceringly with our the main and flight deck exteriors on the port guarter where 0.2 \$774 hours was recorded by a Gelges counter. at 1200 at 2 July. Since the sea on the portside had teen declared codioarthea and Cally, the water paraged onto the thight deck by the salwage vessel in eithe quishing the tright deck time way have been the cause (Hofecorky 1)

2-24 July Commission to live appare Caratona.

24 Suly

0230 1445 Producted greation Recreated in preparation for BANEP.

Shot BAKER (25 July, 0835)

25 July \$9(4

- 600 Charitle suppried Seconding History slightly to starboard (Reference 5, p. 6 D 15
- FOR Charlie reported Satetops a stark collapsed to post and lying on stight 09.74 3e/ 1 .
- 39.76 204 Charlie Reported Serategy Class heal voly by shere (Reference 5, p. 6-B R).
- will Charlin reported Socaross in Camper 1116 of sinking and recommended every effort be rade to beach it if possible iReference 5. g. 6-0 (6).
- 1200 TITE I asked 15 Samptoga mult be case Loose and coved from the cauget array without boundhogs togs (n)(2) the (ATF 22) darected so take Tatalogs in Low. (Day to the very high radioactivity of the water must the center of the arcay, sail vage ships were not ablowed to enter
- Allay Reference 6. p. Vicit 51 Mpl. CTV 1 2.1 ensword CUBY 1 request to the 1210 affirmative. Objekasay directed to be rendy to low Secology to the brock when ordered, but so per while its board if (Retarance 6, p. VII 5-7 5)
- :409 CUTH 1 TOID LOW aboard USA Heritation (ANG 42) pyperbolic granted for Recipteer to proceed with operations conned Sagatoga (Reference 6, p. Vil E in Mi. Resiataet stopped, laying to in vicinity
- 1530 of (Argo) Robeating Wis-Dervice (St )24). Unable to approach Safatoga due to the

reduced by condition of the water (Ref. create 6, p. VIT 1 (1-4).

- \$555 Stern of Saratoga underwater.
- 1610 Bow and superstructure of Saratoon div appeared below the surface (Reference 6. p. VII 1 10(8).

The Technical Oligopol aboard USS Kennyth Whiting (We (4) requested seculces of divers when safe to recover Linear and Log time axis and other instruments on Lat ger ships 058 Arkansas (08 13) and Saratoga, Verboldar Disector was informed that his request for divers would be included in the diving schedule when the struction permitted and other diving requirements when howen (Geforence 6, p. VI(-1-87-6).

28 July Pressure-time seconders were received. Etem Harget vessels Arkgevas, Garaloga and 955 Histilsh (25.386), Kadiatian Intervity files were recomped from Inte and vessels Ackessas, Negato, Seratoga. JES Apager. (SN-2001) and Plinetish (Ref. news.e f. p. Vil 2-63 N).

Renatogals crew was transforred to other CMOCSHOMES. units.

#### USS SEARAVEN (SS-196)

Crew Shren 158

- Crew Larsta Arrival, 30 May 1946 Bibliol Atolia Beparture: 22 Eugust 1946 Crew Location for Shot ABIC USS Followeau (APA-2)5] Crew Location for Shot SAREA Bottineau

- Shot ABL4 Lucation: 1,799 yards 11 b kml Mi Shot RAKER Location 1,819 yards 11 b km; 559 Decenterfmelton totation: San Francisco (Mare Estand

Namal Solphard;

Linul Clearance. 15 December 1946 Sume II September 1946, off sputness (altfoscia coest

Take Unit and Jum Limi The submatino Septement was a membra of TU 1.7.4 (Submarine Gali). Submarine ploision 111. It was a taiget wessel for CRUSSROADS lis new was reactioned before each show.

5500 AB(J (1 ...), 0500)

- 30 June Evacuated order to balling as in prepara-TTOP FOR ABLE.
- 0400 .430 Secured Searaven at parliage.

2 Ju]y

- 08,29 USS Stillah (AS-/S) placed mandling toats an interestor.
  - 00)4 Stillah reported Gearaven Geliger sweet inclosence 5, p. wit 1 22 At. Juliant lawrences team bounded Geargeen
- 1145 1430 for inspection, normal operations restuded.

Seargeen was undersynd ormen for slight danage in seperativeture plaining on the starboard slide. Min pret sale was weaked from the Ablp and both battery fragart service shore the characteristic service an explicitly and the service of explicitly and the service of the ser percentage of hydrogen.

9 July 0001

Tream. C and D sylucies aboard Veaceven Errz Hassineay. Presiding commembers refucied to live aboard Searchers.

### USS Searaven (SS-196)

#### USS Searaven (SS-196)

Shot BANGR (75 (4)), 0835;

O date	Set garage	< r  me	wear-cation	ţα.	Bath Deeper	N
	264500841	- nema	dued aboar	1		

- 0425-0435 by unlog subtraction tools. Sibewaged in accordance with CMRE 1 oper atton 21an 1 46 15:50
- 1010 WWG MULKAL (MSR 8) England Phatavent condition apparently good (Definishing Au v): 2 40 d:..
- 10 U.S.y
  - 1990 (\$3 Gypsy (Kidden)) streamed no warm down Searceyen chesologitay which high provisione boses, then take readings and thy to seasd iketesense A, p. všl., A hor.
    - 1027 Crudy series led musicing down Stationet. An change in reading. Additional fusicizenes being obtained from tigs haven (#5-12) Contercore 6, p. VIC 1 51 BF
    - .209 oppyg reported Gedraeck 2.5 #724 bodrou Monifor advised Oggey to reave vicinity (kelesence 6, p. V31 1-52 B).
    - 1516 Gypsy took deligns treating, to the ofapply of Sectores and respected to structors. Sypsy directed to secure to anchology: Nortelente 6, p. vicel Seto of deck modifys. 1,5 8/24 Sector vice day reading, 0.35 \$724 mours.
    - Seataves, decontaminated onling segmenter and logable (sederation 5, pp. 6.6.41 and 7209 6-0-453.
- JE SELV
  - 1337 coural was dissored to promove to the why consty of Sectores and Nick PallAst (April) as instructed (Setecence 6, p. VII ) 66-36.
  - 1420 through reported measures turned days sourvage houses reneved, and enthres seally for reneval when reneved one Sectarated 5, p. V11 1-01-6).
- 1 August
  - Sypsy separated planting a 10-too beer anchor from Segraver in At feet title seturist of water mosth of succeds to last beryod with spherical budy iMeter 1102 ence 5. p VII-1 53 E:

. 11.2 dypty departed Sear events, stort wathin doubled weiterenze S. p. VID I PA HU. Cyper reported Searages clear (Reference 1585 b. b. valid (0.9).

- Anaguera 000B (1555) Teams & and it around no continue decur familing investigation Reactings for and of an non-ing invest. I no : 25 3/24 bouts: aim of survival towers in to 1.5 \$734 action
- 4 August 0820-1356 Rearding party boarded to impect boat Externed conding tower control room fur ward engine (com, sti alver bartury Sound such toduction paping flooded by leakage but no major dundrye tests of ate and/cated presence of an explosive Explore due to preserve of bydrugen and hael oil vapor. Desuced boars all bands resulted to Postigyau Topside sverage feadures 1 \$2 8/24 bears.

5 August 0845-,515

5 August 1

- Sowyfing Westy Gostand to texame Scoped Four of Generationshop Made Solitat Loopediles of all companyments, venue Lated 2441 to prome Gases, to mater damage field bradeed rate induction Topyady average 2 10 A/24 hours. Rearding party returned to Sottoneou.
- 04.90-11.0 Poarding pacty alward. Tradebord Inspecrior of powers equipment and decentaming. clos reasones in tedate radioautivity protent. Lang bardyhility plan to cose down weather denses Grauthed maindeck while individent supply and biller compound valuations (Privrence 11: boarding party sendered to Acetimeat. 1603 tertion of Amatic

) **A**ugust

- 2950 3545 Boardling party to board to controle inspection and decontacination. Over humay offly purp to have down wrather decks Strubber main deep with settester moan. and boiles compound solutions. An adda timore securities with a type solution was PTployed, VSE Chamage (ATF-101) sprayed boar with a upp splution, and later use Mynatchee (ATF 118) while dis with with water - Topyste www.aye 0.59 3724 hours.
- 8 Jun 191
  - Play dynaster/ast (pt. 1998) same atsend. 1951 to Inspect and decontaginate vessel. Conconversions and ableg white particle component and lys solution, washing down with salewater. supplied by a candybility pump tractide average 0.73 B/24 Course topside baribut 2.13 27.95 Lours
  - 1931 Secondarington year #2 aboards
  - Sont secured: personnel digesters. .541
- 9 August
  - 2405 Shafred all conds to remained rations shap. The File made (APA-82) for Sections and T055264.
  - Boarding party came on board to resume 0.965-16.24 inspection and decontaminstion. Consumed scaussing with indian company and on solution, and washing down with partwated Supplied by a handybility party lipside average 1.28 6/24 transportspotter Hestman 3.37 6/26 Frans
- 10 Acquast

183<u>4-</u>0120 (Kneiding Sogn to period the improvision and 300 4620 decentations signed up position of after objective deca and applied the so-lation to purchase of steel dark those of posed. Used long-handled screpers around base of boldge separatestate plating at intervective with sets deck. Continuelly werting and washing fews with hose to prevent damper from and past(c)ed (bot erence #1.

2545 Gupsy cleared fouled applica-1915

Another cleared, underway on two were en-glands. Anothered that beeth 224. Wikimit.

.2 Apple 1

0425 1130 1107 1615 boardSeq parcy on board for inspection. and Second and Material Topside average 0.2

#### <u>USS Searaven</u> (SS-196) 12 August

- R/74 Newrs: copside ≃aw∖—an 7.25 R/24 Zoarres

- 1650 Usin Seliver (APS-VI) we when boat with pre-water home.
- ( L'Asgest
- 0950 1.06 Monarding Found under on board for Traped 1145 P552 Sten and decomination Concentrates on 540Gpt and counting tower superstructures take, applied streng type solution to all south-before washing down Selectore 64. Topside automation 0.2 2024 House, topside washing down to 12 Automatic topside washing and 0.11 RVA house tobalde beach. Before dects, seen:
- 14 Magnet
  - 0930 5300 Boarding tran on board for Snapeorion and 1300 5555 decontration. Concentrated on bridge and construction. Concentrated on bridge and construction to be in writeres, at lowing 0 to 4 hours before warning down. Also ensted dows with applied with sale water continually throughout washing pe that Generate 55. Below deck, sweet, topolde average, 5 13 2724 hours: topolde swater. 0.21 8724 hours.
- D. August.
  - 09:0 Crew abound, shifting accounter age
  - 09/9 Underway to ubits berits.
  - 1000 Accepted near porth 165. Bjiln:
  - 1005 Post secored.
  - L255 E55J Decenta⇒ination passy aboase. Topelde average 0.16 R726 heers: copside maxi aut, 0.20 R/24 geurs.
- Designation of
- L600-1546 Decontabilitation Leas should be continue decontation. Popside average, 0.16 8724 hours: acpuide estimute 0.34 8224 nouts the deg nouse), befor deck, sweet Staff inspections were completed, but the boat's reports were not received.
- August

- 0976 0145 Decontamination test sonard to continue decontamination processories 1060 Decostation Scale orbitation to con-
  - 1000 Decemberination Ream reducted to continum detentamination procedures. Topside average - 0.064 2424 Nauch, topside maximum, 0.05 8734 Nauch, topside maximum.
- Topolide rudbological reactings on Searaven are lissed. In Table 3.10.

13 90,030	
OP30 15:A	Marking party aboast to container or con- tainantion procedures
011: 010.	Rechological survey party on board to inspect boat
23 August 0928 8448	dearnfling pârty of bened ter nesare deren tertrastet.
23 Karjus: 0520 Ellis	Hourding party on boatd to propate inset for see
22 Moguitt	

65.5 Poarding party on board to statt gyto and commonce prepaturions for getting underway

#### School A. P., Copelde radiological readings (Pr24 nours) on USS Searagen (SS 196).

			-				
		Conn	'ng				
		i ve	er í	aser F≞g Sugare			lup Kåd≠
Dette	9ce	lwd	111	Room	Slern	Br hage	4vg
		- · ·					
1/31	2.5		50	* C			3.63
8//	1.6	1.75	1.5	10	1.5		1.25
870		1.75	15				0.95
674							0.87
975	0.1	0 /	0.7	пј	P.7	ነ ብ	0.72
876	0.4	06	ÓЬ	0.41	2.5		0.51
\$/1	0.2	U. 86	05	П. 35	0.44		10.4Q
878	0.25	0 Ni	D )4	0 31	9.42		0.34
879	9.7	0 25	- Ø - ) N	D 31	D 25		0 78
5/10	0.36	0.72	0.92	0 35	C.22		0.21
8/92	D. 65	с ?	0.21	3-2	2.2	O 21	D.2
5710	9,60	0.74	C.18	D 73	<ul> <li>14</li> </ul>	0.25	0 18
8714	G. 42	U 15	0 14	עי ק	0.12		Q. (6
875	0.14	C 20	2.24	0 72	9.2		0.2
57°6	8.62	11 15	9,05	B 02	Q.07		0.95
8717	D 65	U .5	0 08	0.05	D 06	O 60	0.01
8718	0.00	111	5.67	n Q2	9.07	01	0.08

Source Reference 4.

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- - 0745 General edge; of green on board.

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- 0545 Underway for Reglateria.
- 1000 Partially flooded main tailast taiks part 2 and 3 to increase drafa and work on tapensization to German Addragt(vity)

23 AvguSt

#### 2051 Andicied in Derit: A:S. Reajulein

The entire deck of Searguen was wood except for the atta over the sufflets and lear the how. Statisting Serment ejjective on the wooder draw planeting only due lear the first free days of strabbing. After this the rop at the planking was rare. The side, and leave per the work include Americal of delates on 10 August allowed minimized sole and contratinated paint demaath. Thereby Yoweling Todings.

Since Snarrowen was scraped and repaining with only one evan of pains before accluding as Biblick, there were tern areas of browy paint. Precval of Jight parns and subsitive indirectively. The pairsty of Brazardia Superstructure had become so custed choose age and expendence had become so custed choose of all cust may report of an prover so custed choose of all cust may expendence the readings were 0.1 to 0.2 R/M house below below decks since all respectements were nearly bally below to i R/MS hours for some parate so as (opshide readings decemped) (Reference 6)

Sesigned arrived in San Francisco on 4 December 1945, and was decompositioned on 11 December 1946.

# USS Severa (A0-61)

	052 2[VEAN 140 6")	7653	Monted to Ches wildcas (MM 2) to twelle
Live Stars	45	165.	379 . Underway .
81+101 A:211	Arr?/al. 24 May 1940	1075	ATA 197 Alcogende
	2708-1576 24 August 1946	1150	Reparted Biking Ingaon for Feacl Herbert
	ration : Le reule from Pearls Hirnor Se Elsten		vla Kwajalein
SEC. SAUSE 1	reation (Strong Vieller) :	18 August	
	er (z, elfer, los Angoles	¢€30	Resultance: Wiking Lagona Stor, Post & Kas
	rte d'Hovember 345	****	bor.
		1900	And Turbed for Sector 1991 (white)
Case let 11 ani	1 Function		
tto (41)	es Souvern was a mettage of TU (Charles (Repairs -	Zi Angust	
	vale Motor: Severo provided fuel and water	Ĩ.U.S.B.	<ul> <li>Taroct vessel in three alongside 2 notes.</li> </ul>
	er suggest chtply. Daring the rest waites -		for freebaates
1º Pole	(wo trips to evan) Nation an return.		
		21 Maginst	
Shot ABLE 71	30'Y. 09C.1	:130	Taiget vessel COFCO 615 alcogade 1
			POUR.
2 July 0970	En south from Pearl Harbor to History.	II. Base of	
74.0	er souce from wear, marbor to might.	71 Xaçüer (CON	Three wessel which her almost de 2002
2 3619		1003	"High: session in (c), the special state of the
	Entered Sikini Lacess.	1985	Target versel (201-329 alongside ( 5607)
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1303	Contrary to Ality Decily.		est : signal, to the first editor
1441	Anchozed in test 224.	24 609205	
		1657	Separand Blitter tageon for Respatches
e es July	Permitting and by edit profestand sources		
	duales and way not in exchant with conver-		
	enó Servin		J <u>SS Shakanazon (</u> JN-9B)
			·····
36 J_1y		City State:	
J 144	Codorway to Chate to State	Bheli & Mgo'	41-1-2- Sy 7 April 1945
2425	Anchoeved to beach 200, Mikica,	Jac	Leperture 17 August 1986
		St. 6 26. 1 . 1	Catlor: if ref (13 km) St
(fi SA Doly	Rematowa anchored, pectotoed thating		0221305. TH HIT (17 6.6) SE
	dubbes; but on entry? with terms way		Conflaeration - Rearing and en
	5°\$5		Cimaranza - 12 (elensen 1945) Mito - 4 January - 947
10 July		TANK - Bara	NIE & JONLOND AND
9950	YGG RE dame allongside to stathoard.	1412 0711 20	a kunstian
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		1377	Salvary Colt. Syskamerica's wait durdes in-
(9.0.CY		clusted.	salvaging the changed sarget wedgels after
(52)	Anothered in Gerlin 205, Blackton		sist performing everyoney repairs, and
			a fires.
20 Colly		-	-
150.	Ordeoway co shift bests.	- 5558 Adul (1	1 July_ 0900;
1509	Anchored in bresh 229		
		1 Daily	
1) Duly		106	Codered to place a bootding leas on sec-
0735	YOG bl came alongside to port.		get ship 055 Converging (bb 2711 likele)
1040	YUG AT and Classe Brandly Cars 3921 KARS		COCP M. Y. VC. : H AL.
	off after receiving water.	1225	Kalered Alking Legona after Shot ABLE.
2410 (415	. Cf (150 alongside.	1228	All of worker & declared clear (Peterence)
		147.	a. y with flats.
24 D.19	Because a state water and the	197-	<ul> <li>Microsofic Conytigham placed boarding twan boarding that</li> </ul>
-453	linderwhy for erne variard.	1405	8 absent (Reference 5, p. Vit : 10 Å),
SENT BREEN	25 July, 1906)	·4·,	Reputted Cotyngiam Selger Smool. Bidmini to whichiam eastward above fire
1. DL 64014 (	· · · · · · · · · · · · · · · · · · ·		nishing Conyagaan.
25 JULY		1114	reduced to place coulding team (then 9).
(83)	Obsergeond indext: DEKKS		an invest larger utio .FS Secaroge UN J
	· · ·		using calibon because of prevents fire
is ducy			Reference 6. p. v22-1 it-At.
3724	Entried Likiri Lagan	1577	Tene 6 reported alward Services
2743	Fansed Supy Mr. E. HOC wards (215 meters)	15.31	There 5 reported Engagings flear for 5 and
-	610 7404 t		<pre>inj (Heleronce &amp;, p. VIL-D 12 A).</pre>
2759	Anchored in Sector 270	;12,	Reported parts of Salayoga were such
			active under the flight desk to the
31 JULY			waterithe postuade. (name 90 co furnati
0741	Undormay.		Recondended no sysa buard users 2 thaty
		- 600	

.329 Auchored in berth N. Sikent.

USS\_Shakamaxon (AN-88)

2 July		15 July	
0.60%	Stakar-yes culd all ships in in sector	64/4	MODIFI TO attact ind to have.
	were clears and to place boarding reads	2005 1014	Second cheel long our buyoy.
	Johand as Cestien (Reference 6, p. VII [·21 A).	1705	Underway to array Noored to Eucy in array area. Received
0935	[Spand]ing term alward Sanations, Seported		(eq from (6.6_Omegae (6.8-6.5.) (ald and
	Saratogs Geiger week (Reference 6, p.		serviced leg.
	VEL [ 24 A)	1615	Monored to Obedia to receive monoring log-
0941	Reported Saturings completed and proceed		haid and wroncolued lug.
	ing to target ship 050 Austin (05 423).	1111	workbared in berth 60. Ministry
1000	Repotted locating them aboard Rustin		
3102	(Peterene 6, p. Vil 3 25 A). Remarked transformed and set 162.	16 July 1200 (100	lala kunu siya akakas sadan as da Una
11.02	Reported target ship 1997 Mayford (30) 1997 Seiger sever and all ships in sector com-	1500 1.00	ialió beny lisel chain; anderway do leg- cico.
	plyted.	1505	Laying to of! sarget submarine USS shate
40	Other test to proceed to embyrage.		1975 3055.
1215	Boarding than discharged: bound for 558	1105	Underway with budy to steam of Sease.
	Whateon (AP 7) In a small boat.	(93) (8)0	Lald (luz).
1245	Assistant to benth 4	1845	Apphaeve in Apple 35, Bikins
3-1-2019	Speciality to Willow Gaphia perionality	1 + 18 July	Rowline activities: not involved with
2 2011	southe daties: not involved with cargos	1. 10 0.11	target vessels.
	WENSHIN.		
		19 2aly	
e holy		1100	Clicked integer ship dig \$1218gre 1869
1300 [149	laid and electrical leg to array area		A35
1420+1624 1985	Land and servicited aporting log in array	1465	Proceeding to racyon stap bas sais take
1403	Andre bed for breach an	1110	Chiy (CM 25). Chiy keð Chili Lake Chiy
9 Juny		1407	Anthored in berth 105, 21kini.
0601	Recovered nouring leg.		
0172-0150	Espaged in operation of laying more top	20-21 Joly	- Routine acticities, and toyolced with
	teg.		targes vessels.
1234-1359	unid and accessioned wheeling log		
1670	Moored to buoy by attay area.	24 July	Shitted anchotager several times.
1200			and the second second second
1900	And her will be beach of J. Miking		-
			25 July, 000ši
	Recharged in Nextb C J, Mikima	Stot Bacille (	25 July, 09061
(D			-
D July Dres case	Repeating in beach of a structure for a structure for the structure structure for the structure for th	Stot Bacille (	29 July, öśńśt Pade proparations for sva atter workang
10 July 0145 0808 1125 1115 1350	Repeating in beach C J, Miking Field and Siresched sooring leg. Laid and siresched mooring leg.	500: BACIA ( 26 Ju2y	25 July, 06061 Pade proparations for sea wither working through the highr assisting in suberging
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10 July 0145 0808 1125 1115 1350	Rectangent (a beach of ), wijkten) Finitiand streached scoring lay, Laid and streached scoring lay, Aschored Ir. Beach 96, Jikteni, Husted as USS Ogname (ARX-101) as load	500: BACIA ( 26 Ju2y	25 July, 0905) Mañe proparations for sea after working through the hight assisting in submarging submarbades U <u>ris group</u> wer (XPS 6), VSS (lamp (A6S
10 July Ors5 0808 1325 1315 1356 11 July	Any hogent (n bestb C J, Mikin) Finit and Siresched pooring Jug. Land and Siresched mooring Jug. Apphored Ir. nearb 96. Bikthi.	5405 BACIA ( 26 Juzy 25 Juzy	25 July, 09061 Hafe proparations for sea after working through the hight assisting in submerging submittees Unio provide (KPS 6), V65 Clamp (A68 100, V55 Current (KPS 22), uni Shakayangon
10.101y 0765 0808 7101 0301 1356 11.101y LJCO	Rectagned (a beach of ), without I will and strenched pooring leg. Load and strenched mooring leg. Anchored in pears 96, utkinst. Henced to USS Optimum (ARX-101) to load beavy leg and acchor	5405 BACIA ( 26 Juzy 25 Juzy	25 July, 0905) Made proparations for sea after working through the hight assisting in submerging submittands U <u>ris presenter</u> (KPS 6), VSS Clamp (A60
10 July 0165 0868 1325 1315 1356 11 1uly LJCO 1410 12 July	Anchored in besch C J, Mikini Ended and Stretched Booting Jeg. Laid and Stretched Booting Jeg. Apphored In Besch 96, Jikini. Husted to USS Optimum (ARX-101) to Inad Deevy leg and acches Anchored in Besch 40, Jikini.	5405 BACIA ( 26 Juzy 25 Juzy	25 July, 00051 Pade proparations for sea atter working through the hight assisting in suberrging subburbles USS <u>byrosetver</u> (APS 5), USS class (ABS 100, USS Current shows of the lare tarough (Arget shops flipeyre and USS <u>Cottland</u> (APS 15) and not to cross the
10 July 0765 0808 1326 1315 1356 11 July 1360 1410	Animatic in bestbield, wiking Initial and stretched mooring leg. Laid and stretched mooring leg. Anthored in neuron 96. uiking. Husted to USS Ograms (ARX-100) to load beavy leg and atches Anthored in bestbielde less Suncess (AN	Smot Bacia ( 24 Južy 75 Južy 25 Južy 2554	25 July, 00061 Pade proparations for sea atter working through the hight assisting in submarging submittees USS <u>Meserver</u> (APS 8), USS clamp (ABS 100, USS Concent (APS 22), and Shakayangon directed to gray routh of the tabe tarough (arget shigs fillewore and USS <u>Cottland</u> (APA 15) and not to crows the 2006 wathout Surther orders.
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10 July 0145 0808 1025 1015 10350 11 1019 1000 12 July 1000 1050	Another in bestb ( ), "(kin) I bid and timesched pooring leg. Laid and stretched pooring leg. Apphored in bestb 96. Hikbri. Hoored is USS Oprawn (ARX-1000 to load bewy leg and atches) Anthered is bestb 40. Nikini. Hopped is Duty orside bes Suncess (AW 90): Seld and stretched body ing. Underway for VSS Roberte (MK 99).	Smot Bacia ( 24 Južy 75 Južy 25 Južy 2554	25 July, 00051 Pade proparations (or svalitter working through the hight assisting in submarging submarbanes USS <u>Synamization</u> (APS 6), USS (lamp (ARS 100, USS Current (APS 6), USS (lamp (ARS 100, USS Current (APS 22), und Shakayayan directed to gray routh of the lame tarough (arget shigs filleyte and USS <u>Cortland</u> (APS 15) and not to cross the bittered for thes unders Shakayayan was void target vessels Fill more and USE 329 were clear for a coard-
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10 July 0 re5 0808 1325 1315 1356 11 July 1400 1400 12 July 1000 12 July 1000 12 July 1452 1452	Animal in bestb ( ), Mikini Field and timesched pooring Jeg. Laid and timesched pooring Jeg. Laid and timesched pooring Jeg. Anthored in bestb 96. Hikbri. Monard to baily decide Les Suncesh Jak Monard to baily decide Les Suncesh Jak Monard to baily decide Les Suncesh Jak Mitting and atches Anthored in bestb 40. Hikbri. Monard to baily decide Les Suncesh Jak Mitting and atches Underway for WSS Roberte (JKA 99). Anthored in bestb 45. Bikling, after Lak ang abread an anthor (JKA 99). Anthored in bestb JS after taking on anthor from USS Mentiop (APA 45). Laying Lo In array area for mosting of Laying Lo In array area for mosting wire Lo	Shot Bacia r 26 Ju2y 75 Ju2y	25 July, 00051 Pade proparations for sea wither working through the hight assisting in submarging submittings Unit provides (APS 8), VSS Clarge (ASS 100, VSS Current (ARS 22), und Shakayayan directed to shay fouth of the lane tarough (arget ships Pilipagte and USS <u>Cottland</u> (APA 15) and not to cross the line without further unders Subhamargn was and target upsets Pili bore and USE 320 were clear for a heard- try taxa. Classified target upsets Pili bore and USE 320 were clear for a heard- try taxa. Classified target upsets Pili bore on board Reported Filipagte Colgre sweet Hepothed boarding trans tark of heard, proceeding in (F) 329 Reported alcreside Sibleore, Boarding test on board.
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10 July 0165 0008 1325 1315 1356 11 July 1400 1400 12 July 1000 1050 1057 1457 1457 1457 1610	Animal in besth ( ), Mikini Field and timesched pooring leg. Laid and timesched pooring leg. Laid and timesched pooring leg. Anthored in besch 96. Hikbri. Mosced to budy deside les Suncess law 90:: Seld and stretched budy leg. Underway log Westlde les Suncess law 90:: Seld and stretched budy leg. Underway log Westlde les Suncess law 90:: Seld and stretched budy leg. Underway log Westlde les Suncess law 90:: Seld and stretched budy leg. Underway log Westlde les Suncess law 90:: Seld and stretched budy leg. Underway log Westlde les Suncess law 90:: Seld an anches claim from Holefre Anchesed in Sect. 45. Biklins, after Lak 10: shead an anches claim from Holefre Anchesed in Sect. 15 after Faking on anthor tion und Memories (APA 45). Laying to in array area for Moscing of Larget explorimented meeting wire to anthor of ARuthing and othering wire to	Shot BaciA r 24 Ju2y 75 Ju2y 75 Ju2y 75 Ju2y 75 Ju2y 2154 1421 1421 1421 1421 1421 1451 1451	25 July, 00051 Pade proparations for sea wither working through the hight assisting in submarging submittines Unit programmer (KPS 8), VSS Clamp (ASS 100, VSS Current (ARS 22), und Shakayayan directed to stay fouth of the lame tarough (arget ships Pillaget and USS <u>Cottland</u> (APA 15) and not to cross the line without further unders Subhamagon was abid target unsets Pill bore and USE 370 were clear for a therefore the colored further unders Subhamagon was abid target unsets Pill bore and USE 370 were clear for a therefore the colored further unders beard fillmore Colore sweet wepoined boarding trans tark of hearth proceeding to Fillmore. Stillaget, boarding test on board. Reported alongside EDS should bearding test on board. Reported alongside EDS should bearding test on board. Reported alongside EDS should be arding test on board. Reported alongside EDS should be arding test on board. Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200; Reported boarding trans board on board (Sefergence 5, p. VIL 1 )200;
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### USS\_Shakamaxon (AN-88)

USS Shakamaxon (AN-88)

76 24 July	Anchored: not involved with carget ver-	A Luquet	
	sett.	640¢ 5910	housding team from whatton embarked
10 July		2410	Alongside Mu <u>stir</u> , noarding leas disem tarked.
\$638	Moused portailer at Skate.	1620	Reeminariand boarding tear.
1400	Underway to anotherade.	1.34	Alcongide Larget while Mayrant 4:00 407; .
1910	Anchored in better Takes Rissols		benedling toat disertaried.
		3000	Receiverked boarding team: underway for
TI TOLA			nargen anto bis Device (APA 19), bearding
0:31	Othered to go alongside Cirnug for re-	2/ 0	team differable ed.
	teval of ancients and chain (Velocence 5 p. VCC L-NA B).	. 259 1204	Secondaried Searcing Level.
	p. v., t- 8 61.	1704	Alongside target ship USS Barjoe (AFM - bl): Numbding Leas dimemberked
L August	Continued to plant subsetime monthing in	1105	Reembarked boarding team.
	we of Epen island (Refevence 6, p. v);	1274	Doording team disemboried to whatton.
	1 66 21:.	1352	Anchored in Serth 10%, Bikini,
		1750	Anchoped in berth SL. Dimini.
7 August	Performed routies areautified in Having:		
	and involved with carget while.	9 (1 August	Routine operations: has involved with
3 August	Ulrected to proceed to winingay of What-		Secies Vestels
2 1001020	tion to entropy have dong Team B.	32 August	
11/25	Proceeded to target ship USS Casconete	101	Alongside Hagford to take oil threedoes
	(ADX-Re) and placed boarding team on	1145	targer vessel (CT (1)) came alongside.
	posed after ATA let completed washing it	3315	CCT L115 case off: operation completed.
	down (Refrience 6, p. V(1-1-1)-8).		Underway Ison <u>Muqford</u> .
1235	Reported assignment completed, boarding	1991	Anchored in berth 51, Pauly:
	eese back shoard Whaston, proceeding to anchoisee (Rotegeore 6, p. V)) châl Hi.	.3 18 KGust	Operated to steppic pat presived with
	анстроније склонденсе во роској ство нас	. In August	Larget uessels
4 August	Anchored, not involved with target ships.		(mgc)
		14 August	
5 Rongaant		1955	An bored in berth 105 after refuelting and
(94/	Redself contions of poording tear MH re		constraing water.
	possed aboard froz us5_siaves (An 12).		
	samposed of i stitten. & enitated Hen. and i kivilien.	19 жылаты 0857	Alongside ranget ship (3% Aggles (00-410)
0041	Eight man working party of Gascenede came	007	to take aboard page and generator to Salt
	Abiorfil.		Lake City.
12.1	Eighteen additional members of boarding	:125	Underway from Rughes to Sait Lake City.
	reap & reported aboard.	.227	Alongside Saut Lake Cluy to Unload people
55	Working garry, composed of (* weblets of		and generator.
	target stop in <u>is New Yark</u> (BS-74), ce-	1125	Underway from Sair Lake City to perro
6123	ported aboast. Laying to in vicinity of Saw York.	1544	109. Codecway wa Sali Lake City.
1110	Anchosed in Servit 189. Biking.	ieos	Alongside Satt Lake City.
/00-1725	Layson to in victority of whicton to day.	1645	Anchound in tweet, (A. Bik)ul.
	eaback boarding leas and working party		
: 102	Anchored in besth 3 <sup>9</sup> 8. Diklos	20 August	Apply of the Bistol; pol (ave)yed with
			target vessels.
3 A NUMBE 0710	Lautes is a state is beaution over door	21 August	
0150	Laybay to to pick up heardian, them from Manager	0541	Mooret en target ento <u>065 Densagola</u> HCA-
5520	Scaeding least & reported abcard.		24) to turnish electrical power to port
0800-0919			ancher withdlass
	(20 )Alt hoathing team on through wanter	2300	Çoğermey irom şirmşiğe Pelyun ajar
	boarding teas revelation.	2214	Anchored in Design 108
0937-1005	Alongside sarges ship this bares laws		
	68) hastding term on watte, breaking	اڪترينية 72 101	The supervised and the second state of the sec
1615	leaz coundarked Anchored in berth 198.	.492	Alsoquette Lorget whip US25 Hea <u>ph</u> T <u>ak</u> hot (20-)911 so take its anchor ebcard.
1)66	Nigerees make a of New York from for	2650	To bot anchor aboard
	ported abonid.	. 6 . 5	Underway to enclosege.
: 123	Anchored in beech 201.	1955	Anchored in herth 156, Bistol.
:520	hlongolde New York: Loarding test and		
	working party discrbarket.	1	Linearida Cali data ditu ta contur
1650	Re-mileined boarding team; underway from . Kee York.	0820	- Alongside S <u>ali (Lake C</u> ity to seceive Blues (Lag)
1720	<u>New Toric.</u> In visionary of M <u>warten</u> : New York Dearding.	0835	underway (com Salt Lake City.
	perty discribeted.	0835	Alongside Hughes to unload pump and tal-
1738	Anthored In Swith 348		DOLTS ANOTO .
		1040	Underway from Buyles: duty completed
7 Assust			having placed anthor and pump obserd.
D21C	Anchored in bwrth 105-	1132	Anemoied in Desth 198, Bikint.

# USS Shakamaxon (AN-88)

24 August	Anthoned in vicinity of secth 108, pri- bint	061) 95.01	Anchered to bests 265, Bikins. Goderway from Ri≥ini to Shi with Quiner and C <u>eri</u> t.
32 August 8281	Underway Seem (203 Eypsy (ARSD 1) to vi closity of target ship ( <u>285 Sailon</u> (224- 81).	4 July 6593	Anchored at Roi.
1145 1400	Reying to off Energi Island. Ascholed in Derth 108, Michael	8 July 1986	Cataphained two TRMs for Rol Island.
26 Augu61 0927	Morreg to English to place transport an- cher and chair aboard: furnished electri- cal power to archot etodiess on fatter.	tenp+toda 91 mmlA	Received aboard three drone alsonale from a lighter.
1225 1463	Completed unleading transport profession and chains second electric power se failog Anchored in beirth ICS, Reichil	אוניר 19 ללפן	Underway from Not Extend for all refear- sal of BRASER.
27 August 2042	Departed Bikini Lagoon for Kwstalein.	44 July 0137-0600	Launchard 12 KEY drome control allocalt and 3 FeV dromes.
28 August	Actived at Registryo.	0925-0931 1013	Lander: ske M60 drone (ontrol elistrafe. Anchored èn berth 229, Bikirk.
6 September	Underway Lo Guam.	ייאונע גו	
	us <u>s </u> sh <u>ang</u> ri-la (cm-38)	1675	Vaderway for Rob Splans (roh Wikam) with Tyrner and C <u>ecil</u> .
MILANT ALOIT Shel ABLE Co.	Attival, S June 1946 (Rot Marson) Cebarture, 25 July (546 Attain: 43 と mail (日) krsj (54	41wL 86 2086	Anchored between besins 8 5 and A 7, Sol- Juland.
Final Creasan	cation all muk (11 km) 51 ce By 23 November 1946	17 July 1100 L130	Self-peopelind coage meaned winnyside with hisme KOP druges from Rol,
7:1 1.6 ( bie îot For arce	Fentlion Craft Cattlet Snglypt Un was a nember of Navy Air Group!. Shangri La was responsi- training personnel and pregnting environment the bomb tests. Pour diene airriaft (PSAs) in S <u>charyting</u> e and neue meet to collect	ין פן אנר אי געון אין אויר או	Underway to point fore with Curner and Cęc <u>ii</u> for William Day rebearsai
catioact discremento tisce une vie regil Jogical	two samples from the nuclear close: the name algorithm resained a same distance a detotation while districting the distance is control in endition, a complete eco- unit, which took redar upper wind sound-	0723'0842 1,243 1,244 1459	Conducted SISQUE operations. Lawsthed and Janded 12 FAF alcorade. Launched two doms. Anchored between berthm A-7 and B-5, Roj.
ings ac Shel ABLÉ (1	Bindof, was abound <u>shapqrt</u> ite. July, <b>09</b> 500	20 July 0940-1030	Louerbed 12 MfW drage control attract.
30 June 1675	Underway from Rol Anchorage, Rol Island.	0021-00 <b>90</b> 0021-00 <b>90</b>	Self propelled Marge alongside to deilver Busde röf dionex
	Kwajaleth Atoli, in company with USS Turnes (DO 814: and USS Charles of Cec <u>l</u> ) 193 8355.	73 July (61	Nangea carrying one FMM adongside at B) crone
0114-0159	Launched (our grone rust statem dione control electroff.	Snal PAKEP (J	15 July, 0835]
01%6 0901 09%6-1004 1534	Launched two TBMs. Cheersed AUL2 explosion. Landed size M6F algoriaft. Jachaged is Derths & 7 and 8-5. Rol	24 July 3810	Underwary with C <u>ac</u> il and <u>Targer</u> from Hol to Point Tare for BANGER west.
1546-3556	Jólefd. Carepault-jaunched (2 456 abcorate.	25 July 9724-0810	Launched 12 F6P drume (unique a)receft. 3 F5P Gromes, and 2 T2Ms,
2 July 1627	lindernway Scom Pol ro Bikint with <u>Turner</u> and Certi.	0909 0913 0912-0915 1354 1401 1700	Recovered two F6Fs. Lawarhog three TBMs. Recovered alow P6Fs and four TBMs. Anothered between Dects B 5 and M F. Mos
y July 0550	Boverod Saking ongrande to channes.		Island.

# USS Shangri-La (CV-38)

# USS STODX (ATF-74)

20 July 1515	Self-propelled targe thed up alongside	1452	Received one SbF strength on Award to be stansported to latget ship 050 Pennsyl-
1607	win ewo K64 planes to be transferret - Maard. by)f properive large alongside to transf	0455 1564	v <u>anta (56,26).</u> Bréerway to no alonquide Eyensyiv <u>an</u> ia. Noeret stationad side to possible of
10.27	fert properties to the spectra to the test of any fert to the state.	1675	Pennisylvania Pennisylvania Pisced ShF alternate on data of Pennisylo
21 July			yania.
2655	terit propellest terrie name alemants to te follower une THP and ste PDA drape.	14.7F (C45	Judeoway contucting to anchorage. Acctuded to besch 169, stitled
20 3516		12 Kary	
1745	Relefixed instant fritt slangstide tersdelitier Ner TGM afternaft	3427	Addined sharboard side no hungur shiyi 250 Atkansas (60-13)
.455	Serviced barge alcognide to teller two. Destations	591 S	Regar hutcoing cargo biom deck of Arban - Sea and placing it aboatd LCT 1445
25/0	Received bacan alongstde en deliver one	- 127	Otderway to conduct Lowing operation.
:55	-Administry Cyffe - Yr Genwag, ferry Mol, Collaryd Cy Meser, Maccord	:6%2	Anchored in Dects (54 Bikts).
		.) 241y	
A AN ANY	England Rear Display Displayed by plant Pra-	7.05	Those starbeast side to Saratoga
	12 (A. Ford Island, imail Harbor,	1415	- Seculied one PDF annoration from typicatorya - Bor Transportantics in a Respectively (Bdy - (Marage (APA 61))
	#\$\$ \$10LX (AT*-75)	10,0	Collectory and A <u>lan sco</u> re.
		1903	Played F65 effortate on deck of Pagine.
Crew Vive. 5 Biston Arel:	an Anna an 1946	2705	- Childe Servey (10) (merkjør) (chilge up25) Serveyder (1991) - JS (chi
	Decartare: 25 August 1946	14477	Noveed starboard shift to Nevada, prepar-
	Asten - 98 (e. 4774 km) NV		. Ing to 1945 Army Sent significant from deck
	cation (7 em) (3) km; 40k		of Moveda and place is on LC7 (46).
	an John Sub. John Argentes Nyarennen - ≱≊ Mangeshev 1945	2445-1163	<ul> <li>Neved equiptions from pervada to 10% (46).</li> <li>Anderway classifiers for veryada's starboard.</li> </ul>
	ce 4 Sector 1946		bow.
Fasa interes		1.25	Normal starboard of he by starboard bo- of Negerly,
	n ocean set Sterrings a period of This. and methics unitil Stock powerd target	. 45	<ul> <li>Resumed removing Acty Less on Operat State tech of Nevada 44 (27-146).</li> </ul>
	tor cost BARKA and engaged to calvage.	6.96	Tributing to the level age.
toming tangel k	penergenny repets work and dervolgenning wordens	285. 64 6 5	Anthrowst no injestical
Short Asili (c)	1.12 04000	ne Dely Serie	Rescard storfeard side to Peppegiyania
K Gune	33 1. Cloub	0530	dene ved one Arty reack from Denewy Vacha- for defining to (Carty Diglion Caller by).
1912	Uniferway from Bistolic pursuant on COTE A	(84)	ST SPANNES TO Children.
	EVerianten Prasilian wert NPD 29 th tow	0135	Noored text to Chalton.
2015	Colpet Soumation alts, 450 meantaign (BTF 1997, CAS Minsee (BTF 2017, And CAS Misse	. 513 5129	Algoed Aday (goods of Dagged (At )goo). For every first of the sector of the
	Anon 107F (100).	215	Deducted (1997) and the southy operation. Moored statioard side to Saurogal
7 July		1712	sagasigs placed Army finit equipment aboats out (4.5).
0951	Amenoped an SSR(15) ATA (8) elemptical ARS CV: applicitly is been by the room of betch 2200	270	- Understag with 105 1415 BS (see to go - alonguede Arkandus fut more Arby bost - Mulphents
Oct	Such 29 Second, underway for Yestalede In company with Cheesewa	1830 1890	Record pereside to Arkanas. Removed Army test equipter: Irom Aramagas.
3 2014		.527	and placed is straid (KT-1015) Scipicited university whitipseus from Kowan
2432	Honored potnession for THS gravity SER 1900		жан .
1015	at Realisters. Geography for guarty with at 950 by the	1967	<ul> <li>Orderway with off 14th to come to carget abig USS [24]; Lake City COL-2b).</li> </ul>
-	merent on Same and a second	1115	Moused wind the of factors in the set of the
a July Tant	An busing on Boats: Apoll.	: :47	Lase City. Codeway with LCC-NUL, in own to Children
5 10 2615	Operated in Rikinit: not inspaced with		then proceeded to an terrarye.
	tange wetalt.	: 450	Anchuice is Sikin!.
11 July	management and shared productions are service in but a state	15 July 1700	Notes of the second second second second
1464	Roomed Stationed state eo europei chipi ris Sansunge (Centri)	1:20	Noosod passendo ta carget ship oslokent Tendes kaga 17

#### <u>USS \$1</u>0<u>ux</u> (ATF-75) 15 July

09.75 :719 placed F6P abrovatt on deck of Collegeden. tipuberway to constant toutine touting oper-1720 4110D. 0625 Michored in Hikini. 16 July 0'i25 Moared stateoard side to portside of Sait Lak<u>e Cjsy</u> Began reneving asmor place samples from 0749 s<u>al</u>n la<u>ke</u> ru<u>ry</u>. 08.20 Underway to go alongside UCD Pennakola ICA-241. 6845 Mound statboard side to Prosecola and began reporting as nor sample plates from 1832 vensacialitati 1520 Completed recould arour sample plates 2 August trea Pensacala. Upderway to conduct positing opyrations. Anthored in Bikani. 1335 2008 12 3637 00-8 Representation of the to Neverly 1015 1430 Semaned armo: test places from Neverla 2460 Underway to go alongside sarges vessel ARRC-13 and beyon determine sample armutplates 1545 Completed removing atmos plates from ARIX: L S. 1550 Underway to deliver armor plates to USS Saing Capty (RPA-731) and then to anchor-3 August age. 1244 Anthored to Bitth). Performed company during an Arkint not 20 11 July 7 Request related to target versals. Shot 8401R (25 July, 0835) 23 Južy B Asquist 1825 Underway from Stikini Lagoon, persiant to the L # Sector 1946, to Hongelap Island with ARD 29 in row. 9 August 24 2014 1625 Case oft main now no ARD-29. Underway. pursuant to basic provide cleared Ronge Tab Eageon 2217 Reinferences with Croup Teo. 25 July 0900 Left formation we writers from over procereting to Rongelap Atoll. 1450 Anchored in Desch 9. Rengelag Kingl. 10 July 1124 Underway with MigD-29 its town on toute 12 Auguret Stok Pongelop Laboud to Hikhail Island. JE July Cety Anchored ARS 29 on Deven 44, BORTAL Lacasian. 1134 Anchored in heith 168. Bikint. L Anguest 0156 Underway to berth 279 to comove VO-132 tion alongside USS Maytimle (MPR 33). Reported to Ta 112. il!≰ 0520 0637 Underway with YO 132 in tow, procorded to berth 207. 6859 CfG 1.8 directed Stoux and Mursey to re-poin to Cmi 1.2 T for temporary duty in

connection with decontacinarian of surges

vessels (Reference 6, p. VII-E 66-B).

- 0977 Moores 10 172 alongside potchide of [/SS. X.<u>Jax</u> (AR-6).
- 0945 Underway, reporting to USS Polityro (Auc) (7) Di Cor assignation.
- 1050 Anchored in victority of Bolleyin.
- 1)20 Since directed to get underway to proceed to target ship US<u>R without</u> (D) 4691 where it would would would contract, then thereoughly while Without using Since Stream with attenues the overal of a provide store with attenues the overal of a provide store of the Underway to wash down the hull and super
- structure of <u>M18560</u>. 2615-1130 Bu victority of <u>M1</u>1500, spraying saliwater
  - and supersylucture.
     1832 Auchored Stilligani Caspor
- Stang's commanding biftews reported to USB Registment (APSI 62) for a continuence. At completion of conference, proceeded to target ship USS Castonade (APA-45) and **JB**GC choroughly washed it down using high pressure Resear 1129 Citiz Lie recommended replacing Stong and Hunsee with Showands and Wenal code rather than it anstatting equipters. and personnel (Seference 6, p. 011-1-7) MI. Engaged Ln cowing and ecoring YF 133. 1550-1995 2045 Michored off Rees Island, Bikins, 2605 Underway to Decth 44 to take ARD-29 in FOM: 0830 1246 formet ARD-29 to area off Even Seland. 0659 1040 Engaged in rowing and mooring WF 133. 1316 Anchored in Awren 152, Blassi, Underway from B:0001 (agoon to Kestalein 1602 Acell. 3848 Moored in Decth 4-81. Kwajalein. Underway with No. 27 to the from Newja 1542 lete to History 10 August Entered RECINI Exycon, preparing to moot APL-21 alongside (argul ship USS Geneva 1200 (MEN 50) in Decth 21. 1532 Noored APL-27 alongside Cen<u>eva</u> an borrhi 21 -1009 Anchered to beach 165, Blight, 1522 Underway is Rongelap Reedel. 13 August Őt 19 Anwhored Sn Hongelap Lagoon, Berth 2. 15 August 140.4 Aachered in Berth 42, Biktal, 70 August
  - ille Moored alongkide posiside of target ship USS Hoghes (UD-410), making fast for row ing 1141 Underway with <u>highes</u> in row alongside
    - Distributer d. 1120 Placed bow of Hughes in entrancy of ARD-29.

# USS Stoux (ATF-75) 15 July

# USS Skate (SS-305)

1)2+	Copy: Alt from Augnes and proceeded to anotherage.	:650	Wingoog reported State (maximu) and an chored fore and All (Seference 6 (p. Vit- 1-11 a).
1125 22 August	Apphured to beech v8. Wikinik	,A12	Skyle officers made trip to Reeu Caland. In small beat and circled State, Woled
614C	Underway with JSS <u>C</u> ustic (IN 1961 10 Yow For Kwijaleth,		Sign on which such conding. Thinger: Reep Close Very Redications." The super- structure was wregled but inter and
23 Anguar Cobo	makes of the set of the set of the set of the		outer hills appeared to be incase.
: 250 0405	Antio:ed <u>Dogr</u> it in Dechi X k. Neololmin. Enderway from Neajalein no Bikini.	5 July DICS	Small boos with deboarding twom departure
24 AW731-1			from <u>potrimen</u> e.
5876	Anchored in Berth 17, Pikint Lapoon.	1.116	Aprilved off Share
		3525	Hoaded Skace.
2's propriet	Underway from Pikisi to Respondent with	2650	Hitered Laste through the after sight
45)a 26 Algust	Underesy transiestic to kengalett wint ARC 29 in sowe		mean totabl With the exception of explo- sive percentages of hydragen in harray compariments, encountered to daugenous gases or radioactivity.
£718	Anchored to borth K 8, Awajaleja.	1706	Compioned opening boat.
		1620	Anchored in Denth 201, MURITH.
2 September			
13,00-114-0	Tanget verse) (0)-129 moded alongside - ta deliver c11.	> 23 201¥	Crew reboarded and three aboard Skyte.
>		Shal BAKip (.	24 CLT#, 0875}
) September	Departed Kanjairin for Poor. Harbor.	26 July	
		et 519	Completed rigging boas for atom bomb and
	u35_SKA1F (55-395)		secured the watch.
		103>	Grew evaluated to Boty Impac.
Lies Style 11		2500	Borningay underway and shood out of the
	Arr'eak - 30 Pay 1946		Lago an.
8*21n' A1011	Departure: 22 August 1946		
Crea sarateo	f for AB. ! . USS BOLL "here . APA . 735"	Ap York	<u>Skal</u> e moored fore and all to bury between
	i lar PASER Portional		Betths 199 at 2 299 de BEStel Lagoon.
STOL ABLE 10	calhon. 426 yards (366 mvters) SSE acyttan - H85 yards (357 magers) SA	29 261y	
Shar Shara a	ion Estation - San Frankisto, Mare Island -	24 2619	
Accession to a second a	Have Shipyd'C	0040	2 2 that they playing to most target sub
-	11 San Elego canv:		martices XMare and USS Parking (SS-)04) to hopys being planted of Lee side of Lon
Tenk On'L and			clents issand.
	worthe Skale was a member of 30 ( 2.4 (Sub	1055	USS Achonyme (ATE 148) Underway from each
	Colti Submitting Givision (1). In wate a - vessel for CROASHOURS, the crew way evana	1:35	gèl annay whit Skate in tow. Acharach discussion constants which and
	vesser for another. The crew way evara- Flooth shels.	1.35	<u>Achomae's directed to moor Ska</u> le with sul vage stokers and leavy with willing dea Saby 16 mere exceltan of eachor and ro
Shut Male to	30'7, 0901)		Ducy serviceing wire.
I JULY	Moured fore and aft to buoys owsers of	)) July	
	carges shap but newada tek let ar beret.	0510	Achiever's reported westing down System it.
1210	161. Utilat. No pressnael on board.		followed up on experimental sections with
1244	Herelyed word by coels that Shate was beautiv damaged.		freshwiter and lye and on another section with diesel fund (Reference C. p. Vife)
: 175	Bortiness, with State parsonnel aboard.		SO SHI.
1.120	anchored in Bikiri Lagous.	1) Joby	20 10.1
		:050 1220	Achaman's decoursembased State (Malescade
2 July	Status of <u>State</u> uprercain. Oblicees and		έ. μθ VCC E 60 B/.
	syde on angled heitstopping anythered in		
	Billini Legoon.	l hagust	
2830 6904	USS milogéni (ASR-1) reported manitur A'seart proceeding 'n Sk <u>ate</u> . Mideous atomatika State	9937	ayhogash composed workting down: State (Reference 6, pp. VI) ( b4 B and VIS-1 Mor8).
0905	Widgeon stongslåe State. Widgeon teported Skatt utsate ta buard.		Pored L.
6214	Tacyat vezorie Salene and State reported	4 Ringlast	
2711	TOUR.	:000	Exercisive offices boasded for a tex pin-
0946	Widgeon reposed Skale in sow, proceeding		ites with the tell representative who was
	to beaching seve on they Island (Peter ence 6 p. VII 5-25 A).		making his duity energies reducativity.
1159	wadgeon reported anchared all beachard	o nagose	
	area with State, avoiting high water Reference 6, p. VIP-3 JO-A).	1045 (445	State Courded by all officers, 10 men. And a radiological matirus, machine down

topaide the 1 hear with handybilly pure. Three all copside months lines overboard. as they were very redboardbye. Venued pressure Leon 311 comparisonis.

\$685 \$965

- 6 Accuss 1415 1515 Five officers and planteen per bearded Shate and weiked to reduce radius there. Scoubbed topolde with boller compound for 374 open and washed down with own handy. tilly pump. Swetched where with hydro chiefic acid. Spece was a delibite, kame diste drop in readings due to the acid small effeterence 4).
- <sup>9</sup> August 1315-5450 rout difficults and slatened real local-fed Skale (or decentralisation work 0.28 Webalchee (ATE-118) gave Skale a lyn bath is the mustify, Scrubbed with boller compound for 174 linear and exceed down with one bandybilty pusy (Reference 4)
- 8 August 1470-1550 A decontamination party of five officers And fittees wer aboard State, Menalchue gave Skale a second live bath and a 2-hour Posting down with soltwates. Schubbed for I hour with builder compared. Washed down with one handyLilly jump deficience \$2.
- 9 August Skale officers and crew transferred from Bottoneau to commanmed target whip USS 0835 FIRQUOTE (APA BB). 0905 3020
- Decontamination team algorid. Mashed down-1330 1100 topside with two bandybibly pumps for 2 hours. Hewayed wood deck by after bailing Natch (Reference 4).
- 10 Jungust Poarding Lees on State, Scrubbed (prestd of counting reason with trichlanaethane, Mashed Naap for 2 hours with two handy C815 1610 Stilly pupps (Reference 4).
- 11 August 6830-1405 Morek fang gear by for broadd
- 12 August 6415-2530 Working party on board. 0510 Radiological conitor and electronics inspectron party came on board.
  - Decontaminator by USS Onliver (ARS-23). 1130-1420 Scrubbed (upside w)in colle; corpored for 2 hours and warded down with two orth-Jine hoses. Completed preasment using a The bath creferance 45.
- 13 August 0515 1800 elashing party encard Skate - Zogaged to decontamination treatment. Octobed top side between FTH and AER hatches with better coopeerd for a total of 4 bands and washed down with cole itse houses. Sambowi consisting tower and posiscope shears with hydrocheotic actu, washed is off, they coprated the operation.

055 Gypsy (RRSD ); alongside to deliver anchar and chaim. 1500-5790 L<u>SS Chickanar</u> (ATF-83) gave <u>Shar</u>e a lee bath (Reference 4). 14 August Poarding texe and eonition aboard. Scrunbed tossion with potter compound 0845 J345 tor a forel of 3 hours and washed down thoroughly with two tria line hours likef-Prease 41. 15 Magast 6930 1500 Rearding term aboatd. Scittbed tepside with hotier compound and washed down shorpughly with two trie line bases for 5 hours tillspread of word dwill from far ward 40 MP platform 0555 Nonirer aboutd. 16 August 0045 3545 Poarded with 16 mus maneuvering team and monitors litate underway. Anthony: between Pertin, 64 and 188 Washed Sons for 4 bours with reginned the hoses. Att hands ceturned to Pizzeore via decon 1565 taximation parce Arm.-23 alongside USS General (AFA Phs. 11 August 6945 1515 Boarding trans. months abound Oversoned cutting away line incluses forward of conning comess (Reference 4). 19 Анарга 0930-1596 E-conserting party aboard State for saudblasting. Completed cutzing away line lockets termate of comming tower. Kautzen down with one thandybilly parp. Commenced saidblasting hell between conduct tever and asia induction. 20 Jungerse 6900 1500 Recentarization party abound. Continued sendelasting between conning source and eath induction. We had becomen hatch and counting times for 2 hearts with one handy. billy gamp (Pe(greane d), 21 Kingurat 0845-1515 Poarding show on Skale for shpolice decon-107 Ination work . The readings for Skale are listed in Table & 12 22 Nogust ã630 Theor-Pari anchor doubli aboard for inteto employed 21 August 1010 Dedenway, cound by \$78-46 to wantalyse. М Льдаян í esn erchared in terth & 12. Keejelein. 25 horrast tewed to Sam Prancisco by RSS Pullon (AS arriving there on 22 October.

# <u>USS\_Skate</u> (SS-305)

# USS Skipjack (SS-184)

"bole A		lagnod - gri 15 <u>5</u> Skace			S. Secary (	Abbaril	гө асту	Skipjack had one salvage form book and one deep blog shouldg. In Adaption inter
	• •			·				<ul> <li>CI Life submatche matters bubys was on the sourcase. Bubbles every stating to visionity.</li> </ul>
			Stop (65					of twise twoy exercise (b).
، <b>او</b> ن	3cm	°one≉ Iorentia	441	Encine Ruce	stor.	Гара 13 <del>е</del> Акто 434	te ulty	
						-11 -11	152A	Alterol in surface Skipjack by Clowing
475	• •	10	3.3	2.6	1.2	2.16		<ul> <li>Introduct table was unsuccessful (Reference)</li> <li>5. 5. 6.0-280.</li> </ul>
A/e	3.0	2 B	23	2.9	Ç A	1.12		
8-) 8/e	345	22	2.3	15	0.4 U.4	) 22 0.80	51 3619 190	LCC Convert (ASP Hy managed medic skipperk)
R/3	0.75	: 4	2.96	Ć AŠ	. JE	2.77		Galages (Forek playmed water 0.1 to 0.1
0/ J 21 -	0-59 3-4		2.2	0 62	3.45	37		R/24 hours, budys 1.5 R/24 trues.
d/ / 9/ 3	- An	. 8	2.0	0.85	0.4 0.3/	5 22	1345	Commenced Liceing forward tanks. Mr magenesit is Ski <u>pla</u> tk - Serviced Miceing
8710	C 45	1.2	u. 2	0.55	6.75	0.63		Connected up elser noses wring station
9716	2.35	6 N 16 N	1 D 1 Y	C 64 2 N	0.2 0.7	0.67 0.63	1.00	- Welk: dövöra dottöl. Biem Epemand och after tanks, Skigtjack
¥7.0	0.15	3.85	0.85	345	ů í	0.55	4.00	- did ton wave from possion on bureau.
9277	1.4	¢ !	36	2.5%	0.75	Q.42		These were two preferrs attacted ats and
							1336	three weights and noe anchor forward : Decured: Subtler wurk on Skipjack se
Source	Feren	ence L						parced a success of readitions on the post-
					<b>-</b> - · ·	· _ ·		the management
							1 Karpasa	
		13 <u>5 5</u>	K <u>PJA</u> CK	(55-184)			1440	the submatting is proceed to submatting
In the St	28. 7	e.						<ul> <li>area: locate Skipjack, and begin planting recessory moorlogs to evaluate submarine</li> </ul>
8'e'n'	1.01	277 N.43						(Rezerverke e. p. 42)   69-01.
		Enpàiture Mar Shai				MR 2011	1735	Couching reposited operations cooplete, and chored in booth and singled mucking for
Crew to	n Millian	Apr 2004	SAKER I	1261 1066	v –			- Cawley on Phapygon Prady to state divin
		athan 1						as spin as radiulopical conditions per-
		oral*on. 'on terain						mb1.
			Nate	27 (A) Bar	47 6		Anson U.Z.	
		.1 19#8, a		a. 1971.	tera (3)	1 or site	0813	Could: reported model over Skipject. ready in short diving as soon as radio.
		: Ejr:tior eavine Sk		84 J. 344	ther of	TC : 2.4	1100	<ul> <li>Logical conductions percents</li> <li>Coupal separated toking and contacts on.</li> </ul>
						10 15 Mars		even keel, teek of tabaat as covered with
				ROSEPON	65 - 458	01440 1474		cotal "Meleterum 6 (p. VII 1 7) BC
••	(Mir Dial) -	et for last	I: NDJES.				1672	<ul> <li>Courtain deposited traving titles for aske one mode (course) (con (lowe controls survinee)</li> </ul>
5501 #ê	a e	76°, 690	0:					Diseased to preasin monored over Skippark
t unin							:910	Generative G. p. vi. 1 (198). Analytic protocol Chilghest Inspected from
	30	95/5 Brot	latert G	66 ATC	anoeren a	ed at size		the after a salvace at antiper law on 20
		spectite	itgen ska	pa USC L	<u>nisce</u>	CAPA COL		and bH main balkast tanks with exception
		ence b	оў сжиж с р. VI: :	301. ANG 35 A).	5 <u>612</u> ]ad	Y :Peter		of purioade of conting cover. Boas bist- ing it to 5°, Consequently, then the
13	30	- 2 <u>88.</u> Ca <u>r</u> r	+ct (495)	-773 - S <b>e</b> sp		est landou		intral sand slift on totward deck. Little
						BS Mpogan vv 5, p.		atu, Salvaged air conrections to rusbwr 20. 20. ami 20 main tailait ranks, 36
		V11-1 13						structural demage found iHeleconce 6.
2 Oak								pp. Vic. 7-15 B. and Vic. II. 76(B).
	155	Custent	reported	heatdlin		on 5532-	) August	
		Lock.		• <b>C</b> hinda			5959-1946	Diving sporacings, such cost on Syspignik but is sain as demonstrations where but do not
	124		na jartas Na Kulta (			ter same:		by Couchi, no demogr discovering by diver. Residence bases were Countriest and striked.
	111	Tearch A	and U /			1 NO3374	• • •	• • • • • • • •
•		opariand.					4 August READ IR C	A
							0745 (0.0	CONVERSION OF CONTRACT OF CONTRACT OF CONTRACT OF CONTRACT CONTRACTOR OF CONTRACT
121.	ily	Ce	ed abcar	a skupja:	t%_		u140 .e.0	gewan contening divine operations of Stipjack,
2 23 34	•	cean ada Si Lubyi D		: Skapja:	τx_		h August	Stipjack.
2 23 34	Leta di	25 July: 3			TX.			Stipjack.

#### <u>USS Skipjack</u> (SS-184) 5 August

ente unsuccessifuit. Pie bailast tanks de Ropt 24 sissemi ako frakagriat do mean rank topot Operations on Skipjącii so Ropud

- N 9 August Diving operations conducted on skippack.
- August Diving operations conducted on Skipjers by 222 aldgeon close Us.
- 14 35 August ballvage operations an Skipjack continued.
- Ji Auguru Minne progress made on solvage of Skip yack
- (9 Avepus) Attrospics to enter tight the rops of the material balload same of Shipjace proviseding classic
- 28 Augus: Salvage on Skipjark proceeding stowly creference 101.
- September Swipjack (a)sed: boarded () 130%.
- 5 September Childen department Mitteri für Kendenheiter nomen by JCS Gypun (ASSO 1).
- 7 September Arrived at KwajaLets.
- 31 September Departed Kwejslebh for Penni Harbet, Kewen ty Lought and Dis Swimpts (MR: 151-0)
- 22 September Appropriate Part Norther -

#### 055 SPUINE (AR: 24)

Sice Size 155 Staant Arriedt, By 14 June 1986 Sikkob Repacture, 19 August 1986 Shot ABL Localisen voi nob (52 km) thi Shot BALL Localisen voi nob (52 km) thi Shot BALL Localiser 70 nob (52 km) t Scontational Localiser, 14 kmoreles Coprational Localiser, 14 kmoreles Sprational Localiser, 21 April 1984

1254 Unit and Function Tar far-fing front regards stilp Sphiles was a number of TO 1 3 1 (Sepair and Security Colt) Sphiles pro wided a reinternation and typat: fatibaty that was its average percent of the time field form 45 20 daily Sphiles personnel (sphiled boot people bag).

SAME ASCE AN OUNCE DODGE

)6 Jany -

- 1455 Enderway to associated upprating areas.
- r Unity Severating on related formation with the same Matcas (LSD 25) USS Carston Paril (LSD 54, USS <u>Pressue</u> (Sile (APR-44), Ath 16) and sold LST-388 on area Prekard off (U KINS Acolity

Phys. Anchored So bench 2659, miking.

- 2 July
- 1357 Anchored as borth (Di. Baran) Atopic.
- 1-23 July Pourche Antivirgen: no community waith saying the vessely.

SHOT PREED 425 JUMY, OBJS:

24 July

- a soft Proceeded out of the hatbur.
- 25 July Streamed on company with Group IF of TG 1 8 1m area for EMKEN tool 0552 Freemeded Sciencestly to Recyclap Anull.
  - (A/0 An Action of the Depth 6. Strapping Atoll.

10 3627

0560 Otdetway en rouse to Bisto) Atoll. 1711 Anchored in perun (17. Bisto)

2 Annuast

- (64) Anchored in a flow between profile 3 and V. Bikini Asoli.
- S Augusin 1016 IDIC Radisate Investigation party from USS Ravea (All 12) aboard 56 Toxpest ship 1976poistors.
- 3 August 1125 Aimhoed in head 11', Bikini Arolli,
- 19 Acquest 1011 - Justiceway Data Beagleteeta
- 26 August 1245 Representation Revy C. In South 15, Regiptedue
- 20 August -26 September At Kengalatin, randame activities
- 21 September Target Vessel (21 722 meaned alongside approximately interact.
- 28 September: 22 Knoesber Resting Action(Test
- 28 November : Best two PCVPs rod over the world's fire. Eligibility advised (25 129
- 29 Movember LU Celember Pseilere Accivitier
- 12 Descender: Radioological safety pasty descrided (gittin to contact a number, The survey Societated that the ship was generally free as on tablishing in a generally free as on tablishing in a generally free subsets up the This conservation or current to shippe all the conterport delps that had extended 2006 the conterport delps that had extended 2006 the conterport delps that had extended 2006 the conterport actions are omposized as and deconterport by a like only generally and a recent conterport the only generally and a recent conterport and the West Coast As a result of the curvey. Splitch tracebad a radiological operational clearable in preference in the West from the west on the preference in the west from the west on the preference in the west from the west on the preference in the west from the west on the preference in the west from the west on the preference in the west from the west on the preference in the west from the west for the preference in the
- Development Print Lee and Sold Sec.
- 14 Decembers Departed for Make Island

	<u>355 \$140</u> 0, (00-406)	1 KuguAt	
		3225	USS ACCOUNT INTY-1485 underway to Stark
(rew Sire. ) Mikimi deriva	02 1. 32 May 1946	3116-140C	<ul> <li>Rehommer washed Shack Gowe with midship monitor (kufecence ). Achomment:</li> </ul>
	ure. 34 Augus: 1946	1720	Capitalin, come baggage, and records from
Crew Location	for Shot AB USS Beatheld (APA-33)	-	State constrered to USS Pockingham (APA
	tor Stol SAKER Bageleld		229)
5000 AUL1 .04	ation: 1.327 gards (1.3 km) AMA rathen: 2.003 yards (1.3 km) Am	1402-0420	Howe reen were aboard from Actomaviand
	1949 off twajale's	1532-1501	wested Statk with Myer solution. Second with Myer solution
		1671-1640	Achoment washed down portside with mid-
Fash Units and			ship monitor.
	cover <u>Arack</u> was a memory of to 1.2 3 (De - Unit), Destroyed Division 2, 31, was a ter	:457	<ul> <li>Act<u>eracy</u> (anteraway to broth 14) Orcherence Acterization</li> </ul>
	el for stats ADLE and BAKER - FLS crew was		an grader and
evacuate	d before each should	2 August	
Shul ABLE 11	1.1. G330:	0180	- Communiting ulfaces, field Similarians, and - wight seen rebraided State to detroitest
Punt vBr( 1)	Verij, 0190		hate it.
29 June		3936	Achonavi underway for Stack.
1575	Boarding Team D transformed to Bayfleld.	1000-1009	Achimanel sprayed Stack with the salution
15 June		1017 102; (238-1 <b>34</b> )	The men from Achemical Digided Stack References and second Stack of the loss only bland
0945	Commenced evacuating personnel, baggage.	1723-1232	<ul> <li>Actometer: sprayed isogic with the solution Captair of Bchammeter a clyttlar, and mene</li> </ul>
	And records to Baylinid. Noording Team :		inerg of the Actionary incerding town or
	sets ship		Stack
1041	Rebserding Team & Left the ship. Capasin and reboarding Teas & loft the	1914 1900	<ul> <li>Notionary sprayed Starty with the une ballies compound solution</li> </ul>
1146	ship. Completed evacuation of personal	:310-1312	- Achomani Aprayod Statk white Lye ass
	to Barfield.		boildet katpound providions.
	Restaurd on thread 178 Hillson	1426415	Achometel waahed Stack's portaide with
1 /014	Anchored in berch (28, 81616).	144. 1504	-mater. - Achomany: s party tech readings on Starm
2 July		.517	Achimath underway to berth 117 (Reference
910 <b>1</b>	WS) Surveys (AN 83) were informed that		) An Isamers'
	al ships to sector were ciwar and to	1520	Captain, first (levtenant, and eight per
	place trans aboard as desired. Team 5 - bearded Stack (Reference 1, Subrew F)		ta Slack
JI (*  #1	35 Conserves (Aus 19) placed a basiding	> August	
	team on MAIN Helezenne 1. Conserver().	2745	Achtenend undernehr für billerk
425	<u>Consequent</u> reported Stars Califor sweet Commanding of those and reboarding Team A	CM42 0912	<ul> <li>Aphropage and the first state of the sector o</li></ul>
	Late hayfirtd to reboard ship.	2900	Decorrentmation teams ( and 2 from Stack
.440	Packed op safely mailton from USS Reven		Searched Statk to decontradicate St.
	(AH 12)	3957-1055	Achymani weshed down Steck with soldwate
1200	Commandang offices made superficial to - spection of wesses before reboarding.	2112	<ul> <li>on the positive (Performed 1, Achonael)</li> <li>Decontaministion teams 1 and 2 (wit Stack)</li> </ul>
3525	Commanding officer, salesy waving, and	1129	Decontamination reass 3 and 4 reboarde
	Team & reboarded		3( <u>96</u> % fo 0000010#10410 1%.
1540	Reboarding Team & came on toast	.623	Decontablication tracks F and 4 yett Staty
סקי.	Pemoved personnel (Lim bodges, casualty badges, and pills, (suffur rabiers used)	4 August	
	to measury roduction; from incortions top	2410	Contestanguettest (Page 1 and 4 reboardes
	which and below decks.		Start.
:140	Reboarding Team C came on board. Reboarding Team D came on board	1015	Decontaminetion team a left Signk Decontaminetion team & left Stack.
1415	Printing from a case of cost.	:170	Hereit anteration teams 1 and 2 rebuscies
Sterk cree L	wing account by ) July.		∃to <u>s</u> t.
1.1.1.1.		1690	Decostambeation teams 1 and 2 test Su <u>ar</u> t
2 Coly Cate	Underway to shift anchorages.	6 August	
083:	Anchored in Death J28.	3006	ATA-180 underway to State.
		2010	ATA- (AS working party of one officer and
JUD: FUEL (	25 (Aly, 08)5)		<ul> <li>six milisted men from Stark came algory to assist in decontamination work</li> </ul>
Z4 July		11.0	ATA-18E archeled about 10E yates 145
0865	Committed everyating tree to sayfauld.		meters) much of Stack in target array
9855	Meboarding feam C left the ship for Bay .	3226	ATA 185 undernay to wash down State with decomposition solution
1075	field. Petranding Team & Left The ship for gay-	1235-1430	decontamination solution. ATA 140 weaked down S <u>ta</u> ck
_	f1 <u>e1</u> a.	.490 1500	ATA-160 Selges mentions cook readings o
LOAD	Copiesn and reboarding Seam A left the		Stack.
	whip for <u>Devilo</u> id Completed evolusions. Thip	1500	ATA 180 Underway 4Ke(evenue ( ATE-180)
	ently.		

3225	USS Actomet late-1481 underway to Stark
LO-140Č	Roha <u>c</u> aw) washed Stack Gowe vkΩ, midship ⊐onitor (kwfecence I, Au <u>ho</u> me <u>n</u> i).
1520	Capitain, come baggage, and records from
	State completered to USS Porkingham (APA
	229)
CZ - C420	Howe came wond aboard fairs Actomave and
32.150	wested Stack with lye solution. Scened with lye solution
21-1640	Achomani washed dowr pochside with min-
	ship monitor.
:457	Actioned underway to beach (4) Octarence
	), <u>B</u> sho <b>h</b> awi),
ցացո	
0830	Commanding ulfices, fless Stellenance and
	eight and rebanders stark to derivities.
00.34	hate it.
0936 06-LOD9	Achimanel underway for Stack. Achimanel sprayed Stack with type solution
11 1021	Two men (row Actionpet Districted Stack
38 -: 34)	Achonics sprayed Groups with the solution
23-1232	Capteir of Achanawi a civilian, and arm-
	issis, of the Achaminet issueding town on
00611-00	n <u>each</u> A <u>choman</u> et speaged Stack with the and t
	balles compound solution
ne-1352	Achonani sprayed Statk with Lye and
26+.435	Dollet Catpound providion. Achemism: wayhed Stack's poits(de whi)
10.1410	monoment wateries block s portailer with: monoment
4. 1504	Achomanics party took readings on Stark
1515	Achimawb underway to berth 117 (Reference
1520	) Altoner) Castain, Einst (testenami, and eight men
φυ <u>43</u> 1743	tothe second statements of the second
42 0912	e <u>chogony</u> i underney for high k A <u>chogony</u> i nandrod down Kiy <u>e</u> r with natherier
•	(Seference 1. Actomovi).
2900	Descerimination teams : and 2 from Stack
57-1055	homored <u>starth</u> to decontradicate st. Achiganet wished down Stark with soliwate:
37-10-15	on the neership (Betweensel' Achrevel)
21.10	Decontaminstion teams 1 and 2 [eft Stock.
i129	Decontamination reams 3 and 4 reboarded
	Stock to decontaminate it.
.613	Decontactmation reases F and 4 wet Stark.
g 18 F	
2410	Secondamy without teams I and I rebuilded
10.5	Start. Decontambretion tram a left Stack
1015	Decontamination team & leit Stack.
170	Hereit antistic trans 1 and 2 rebuseded
	Btegtt.
1690	Becontambhatikor trams 1 and 2 test Su <u>ar</u> r.
NULC .	
1006	ATA-183 underway to Stack.
1010	ATA- (AG working party of one oflicer and
	ste enlisted men from Stagk came aboard

1 August 19920-19975	USS Ktigh CAN 292 alesaside Styrk, placed 19⊒= a&vast Skofriende I. Pjian).	ar Jacir Dy
10 Noquint 0800	Eightein, engloregong offlier, gepoery pildeer, itss liebtenant, and eight man working party reboarded Stack to make yound inspection togolded and below	Chos Abi Jā June Caŭ
1920	Becks Engineering officer, gunnery attices, Jarst Heidenant, and part of working party Jeda S <u>ra</u> ck.	t Poly Jhe
£100	Captain and remainder of working pacty . Lefe only.	
10 August		145
1945	Capitalis, Antist (four-party reboarded) officers and working party reboarded Stark to relist anches.	315 263
9720	Englisering offices and 16 eva let: Stack.	
1.400	Captain, dirst likeltenant, and working party lett Stack.	164
19 Jungunst		165
1041-1100	VSS (Wellver (A45-2)) moored to Stack	\$74
1133	(Reference (. <u>Betron</u> )). Pogimeering office: monitor, and seven printed per boarded to bother anona: for	28; 281
p.=,	towing. Towed to Kwajaleis by ATA 197. Topside Average 0.6 R/24 bours (Reference 7).	281
20 Regist	àtrived al Ruajalèjè (Pefèrmòce I, ATàri 192)	291
24 August	Stark crew (8t exclusion werd transferred from Porkingham to grif Rockygil (APA 2005	Σ 361γ 070
28 Koryash		680
20 NADOLL	Stock decomistioned. All partonses. Linen, plankets, ragery, manifal lines, and cloading lags were disposed of th they had been contaminated. All waste waterlat and dirt had been removed from	685
	the ship hefore evacuation on Risk in; (Hefereice 3)	8 <b>~0</b>
36 September	Topside average 0.25 R/24 nourc.	LE1
SUMARIA MILLER	:M:: ++0 \$\$\$ ALLEN M SUMMER (80.692)	103
	USS SUMLOCK (AN OOF	164
		105
Erew Chiel & Blanni Asoli)	3 Arilwali (By 2 April) (946	
Bikhal Aboli	0eperiore 30 a⊙gust1946 atiun 18./silintike;Sf	112
Shal BARER In	(artun  6 mm+ (3) im; (j	113
Decontaxinat)	an Epcation. Puget Sound	
	ielarande: 47 December 1945 de 13 December 1946	

Task up II, and Function. The net laying ship bencady was a material of the 1.2.7 (Salvage Uold) Sameorit's duties included moniforing target vessels, salvaging damaged sarget variable when the cases, performing emergency repairs, and fighting firms. Following stor BLAER

analyted to recorreling an instrumentation ing and 2,000 feer (610 percess) of caple laid 1255 Correct (ARS 22) before DAMER day.

.

F (1 Joly, 0908)

C 900							i special
	Boot 5	1995	FOR	çesi i	- toats	a.:	16.5 0.051
	Steel	IS Je	nd ei	t she	request	of C	મય્ય શા.રા

- Ordered to proceed east of array and nave 2 a ponytor check ATA-192's fitefighting equipment.
- r Requested to provide a ratio ogtopy report of ATA-192 firefighting equipment. Subjecty reported underway for ATA-192
- Ĥ (Reference 6, p. VII 1-14 AL.
- ń. Reported proceeding to target ship USS Casconade (XMM 85) (Reference 6, p. vil : ] . . . .
- Directed to place team on target ships J Carconade or LES PLETE SAPR-691.
- ı. Boardship Giscomde (Reference 6, p. VII)-7 16 25.
- L Reported Capitonade Califor Swoot.
- Requested a frieflighting shap to front a the fire in Buile.
- ı. Beauding reamon sarent only USS Corrigand (APA 15)
- Reparted Cartland Gelger swort but dan-getace due to several fires to virinity of the Americ(tion (Reference 5, p. Vi) 1 19 KL 1
  - Anchesed in Neish Peret, Sikini, а
- 1 Undersway for Butte, resuming selvage work begun on ASCE day.
- ń Nove to off starboard revelet of Botte while boarding team went aboard the vehi sel.
- ٤ Boerding ream name aboard with report on Birre, proceeded coward carges wessel has Parrow (Ara 51).
- Nove to all starboard side of Derrow: 5 proceeding to contland.
- how to all starbuard quarres of contland ۰, while boarding team what aboard the ves-542.
- 1 bounding teen returned with report on Corriand: proceeded to seaplanes anchored In massion.
- 5 Scopped near anti-ored planes, boardbry tean abound planes.
- a, Boarding team seturned abound with report on planes: proceeding to serves ship USS ralmeright (00 419).
- Ċ, Stupped off one of Malowright: hoarding team went aboard the vessel.
- 5 Scarding teas returned with report on Watchintght: proceeding to target ship (65 Willing (DD-408), Have to off steen of Willights beatding team what alward the VESSE
- 1262 Boarding rear recurred with report on Wilson: protecting to target versel LCT-705
- :245 Searching team returned wish repose an 407 105: boardbay reak proceeding on ras Get vessol 1x17 5011.

### <u>USS Suncock</u> (AN-80) Z July

1759	N		
	Hoording rows callenged with report on	,s ⇒vtγ	
	City (Build) underwoop (on CSS what was 1475-11	3912	<ul> <li>Loderway to intrinsip cores of surger Grap.</li> </ul>
	to secon boarding reas		Une Mervodo (BP 36) and then shandoy to
1410			
14.0	performed another to enclose the performance of the		recolve wire from canzes werkel addres,3
	tean diversionant.	)945	AskCored Active of Neverla Hear bench (183)
1412	Off-Period (A) Denois P	1459	Example, she to by out to of negodal
: 559	Anomolec in parts P of Francis and	20.02	
. 275	ALCOUNCE IN COURSE POINT BOAR 12,4720		analiting others to artach and assertily
			alengside Akür) "Y.
4 1.409		1700	CARL OLD AMACHED.
ican.	and the term in the second second second second	011-1019	
	anderway to large to store light on the pri-		all nuted leg asserbly
	sтар USC Астальны сня тор	290 1	Completed displaying leg assumings pro-
2055 (200	Receive the stern blog of Arkarying to the		weekled to an her sponses with Path River
	509Y5 54/W.		HA Date
12%0 1410	Proceed the Control of the Case Processing of	241	Arronned off Fall Fiver real borth St.
	[1] & ZALE ASPEND HERE TALENDER AT THE UNDER COMPANY		P1/s1/s1
	way to p05 kaltysa (UNS[T] DF		
ite D'a		<b>b</b> 1 . 1 . 1	
10 L 1	And belond (1970) (1078) (1070) (1070)	AC JUDY	
		0.45	Undusway to Onecra.
6 July	Representation of the cost of the second state	2878-0145	Refred Ly Onestal
		1044 (255	Antecred off Homesters
1 July		. 256	Cheforeway int Cherois to allow the ensure
975)	Contempy and every solidly		bly to modeful.
587/		1995	
107/	Anothered ourside duby array to away		Hudted fo Orental
	clearance of target only Secure	1605 ;445	Attacked stating leg to modeling not
242 (41)	Primeduced comparisons ( ) with the backy ( ) that		mented approximation log
	CONTROL OF CONTROL	1458	Planced feat proceeded to ottake to four-
P 4 4 5	Alonishde UCS Bolenie (ARX 1911)		tooring ing inverties
		2720	No fee to presta
S 10-9		(MCC 151)	Attached mouting let to taxing, com-
		1000 1011	
1918	inducery for morning array to plant moti-		mensed susceptible jusy.
	Ing 2007-	26A,	<ul> <li>Completed thyong leg assembly, proceeded.</li> </ul>
Gi:2	Retrievered theo pustment to prate buy		to such or and .
(820-11)2		1626	
	Planar edit tatak inagi Berry	979	Annhaired parth of Senah 15, Bastol
0.55	Alongside Pointne.		
. L 10	underway to plant brogs decigent conter-	48 J-249	
	an tions	277	United way to spring on side Onescal (avered)
		2000	
2443	Complement planting of every letters ay the		, off spern of ranges ship USC Steadoga
	SOLECTER.		(CV-14).
19.4	Monster, for Herbetter,	10.0 0.045	As Lorden's and the house in streetward screet of
			ted ted
4 July 6550		1896	Percoped long, pronunded to Octowa Lo two
655C	Wederberry to follow and any to placet Southing		delive modeling gean
	Server 1	1.70%	Contractory (is - Oleman to Caroly) while \$255.
	A		
Date	Proceeding to plast clurge for Ausy.		Sale cave CSUV CONVENTIO plant hony.
	Proceeding to place clurge for Rucy. Nample/ed dropping clumps	1423-1442	Sale Lawe Caty COMPANY TO plant hery. Planted body: presedent to adothera-ter
0810 2843	transferred dropping clamps		Planted bady a proceeded by accordance.
Dait 1843 1911	Nampheted dropping milampi Alampside Otgawa so tollect monoling gran.	1950-1942 3400	
0810 2843	trapieteid dropping richaed Alangside Otsawg so tollect mooding gear. Dogereay to geograficay to static let te	3400	Planted bady a proceeded by accordingly
0810 0942 0011 0250	Nampheted dropping milampi Alampside Otgawa so tollect monoling gran.		Planted bady a proceeded by accordingly
Dait 1843 1911	trapieteid dropping richaed Alangside Otsawg so tollect mooding gear. Dogereay to geograficay to static let te	3400	Planted bady a proceeded by accordingly
0810 0947 0011 2250 (129-1412	Nampleted dropping rights Alangside Ottawa so tollert monolry gear. Brightway to teapy toray in struct ley to Dooy clamp. Autached leg to newy clamp.	3400 04 /039 0345	Planted Dapy, proceeded (riscondauge, Archoices real best 1,464, Julkan) Indeeway to Ontwee and Pentico.
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  - underway, proceeding to berth B. :612
  - 1600 Made inspection of engine rook and water totate to determine rediciogical costs. (ton (condition normal).
  - 1702 As hered he beets a off Elwa Iscond.

28 34:4

- D34! Shifted to berch 019. Suncock and Omental assigned to activat even and and/arts free extremes to the used for Test CHARLER (Poference 6. p. vf3 I 63(8).
- 29 JULY -Anchored meat bench 1991.

30 July

- C227-0225 Solited to bergh P to lee of Knew Suland
- 31 3619 0825 Directed to go alongside Octava to avoist te loading apphors and chasps (Seference B. P. VIL 1 58 ID.
  - 1523 inderway from wooling array to take onwater.
  - 1252 Completed saving on water from day wind. max (AM 2) Shuterance 6, p. VIT 5 64 2011 doored in petro R
- August USS\_Ktigh\_CMH\_TP1, Suncork, and USS\_Mem. ges (ARSD 2) remained as another in berth. 3 on standoy status (Reference D) p. VIL 1 66 FL.
- Southed to begin 319. 2 August
- 3 ALGUST Success were directed to present to use Falter (AS-11) to entark instrumentation real, then to proceed and couover firsten. went string and y-DOC fire! (610 writers) of cable Cald by Current before RANER cay (Reference 6, p. VII-1 05-8)
- 6.6 August. Ansnored to April .
- / August 6849 Boarding Reas #30 rejorted aboards under way to Gastogade.
  - 0985 (112 Westdamy Leave aboutd Castopade: underway to nincle Guscenade to take photographer. 1150 Leving to off Whatson. 1155 Hoatding seem diseptasked for mourton. 7245 Indicated in leasts 6 off Shee Spland,
    - 2625 Record to beits 88. Dikini.

5 August

- C825 isoardong Lean 410 case alsoled flow Montere proceeded to entern whip was not \$45. to place boarding team MLO aboard. Monive to 1.57 (4), boarding team stored
- 0650 0900 157-545.
- 0911-0925 Rooted to carget ship 505 LST 601 while boariling sear boarded
- 1945 2955 Received the Logiget ships (30), (17) by white bosticiting treat boarded.
- 1004 1012 Reaced to carger ship pays and 11) while boarding seve heatded
- 1032-1055 heatvá alongslók target ship ušš Critiga Gen LAPS 111 while Monthling Loom boasded. Pisenbusket boarding than 410 to Whatton. Accessed in Artin 66, Bikini. 2121 2143

9 (1) Assault And Scould Le Aread by Rd

17 August

- i.90 Underwar to protect UDS Course (MSR 8) to monting buoys.
- 1015/1102 Shopped rear Destonate to Poblat Reary on Óraik.
  - 5850 Regain planting buoy off low of Coucat In-)the with bow of ranges ship USS Pennsylva/rta (656-181)
  - 3153 induced propping another
  - 1253 Completed planting Novy on Evacings: proconding to back of Persylvania.
- Stopped off storp of excitationants to bots: buoy as deck, proceeding to plant 51F1 01C1 budy off daught in the with new of Perri sylvarie.

# USS\_Suncock [AN-80]

# U<u>SS Suncock</u> (AN-80)

: 17.9	Completed planting busy.	1554	Archor on Brude fauled: spols, working
1425	Antauted in borth 00 Dikton.		<ul> <li>party of nearly, having received tolerance buy day idaily astronoble scierance at</li> </ul>
11 August	An Tarmi as Colore.		- CHOX SROADS Have D.! W/24 Homoret: Facility power (The.
14 August		:6:2	underway from inclusive to enchorage.
0459	Sträenway to go altergable facest subtailer SSS Ba <u>rche</u> (SS )%4; to kiver Packet's	:MC	And ored to terms SAN.
	(outral anchor)	52 Andress	
0111 060C	Plotogalde Exceles to clear fouled anchor.	0427	Information of alongside Brule to Surmist
\$1:0 (20)	Anytopred to secluley of Pereiger Rollsted		power to house eration.
	inoperative motor Launch should.	0940	Peniser and working party aboard R <u>rule</u> .
242	there may to within ty smith of Myzada (5	39: n	Rested slangslike <u>Houle</u> .
1309 1345	<pre>recover small cylinder market bucy. Sropped south of pervada: hotstad bucy or detk and secured collapsible balloon to:</pre>	0421	<ul> <li>Thip to share power lines connected up and furnished power to apphor windless on Brule.</li> </ul>
	N.	1233	Pinished furnishing power to Brain, com
3435	Anchored to beith 50. Bikint.		pleted housing Brile's anchor,
		1765	Cast off Lines from Brule.
15 Rogest		1 100	transferred monitor and working party to
τοες	Underway to driftender to clear lowled		balley:4.
	an other .	1 718	Anchored to Averab 54A Dikard
6845	in vicinity of Crincender, awaiting an		
	rival of monitor, captain and working	26 August	
	warey of Crittlender aboard	2155	- Underway to go atomyside target ship JSS.
0940	Monitot annived and boarded Crittender:		Carron (NPA #1).
0958 17CC	Movered allongside criticion <u>den</u> .	0925	Housed alongside Catron.
3640	Contract and leaved fouled waittender an then.	693%	<ul> <li>Commenced Successivel power: for holisities.</li> <li>Casimon's another.</li> </ul>
2,109	Conderway from <u>Crittennien</u> in Pal <u>mern</u>	2415	Spiderway from Catago to onchorage.
1.21	Crittenden capsain and wen disembacked.	1562	Anchored in berth VL.
1735	Animared in Secto MA. Hiklot.	• • • •	
1.47		07 BL 4-181	
16 August		ft (a	Orderway to go winnighte target ship 158.
6755	When way to tabger ship was <u>N</u> ewson (APA)		Bacher (AVA-60) to livenish power to holist
	795 to fertilist poest to help? anchor.		atchot.
0625	in which by of <u>Deve</u> ory analyting ended,	1.13	Assistance of render, returning to any
	of monitor.		chorege.
1951 5	monthest about a Dawner.	3.19	Analioted in Section 91.
0845	Proceed alongside Davaog.		
1143	Underway to Cast <u>kha</u> de to assist Etleh in	78 Aluquist	
	clearing fouled another.	0838	<ul> <li>Orderwsy to go alongside target thip USS;</li> </ul>
1725	Moorned to steen of <u>Fancegoode</u> .		
(000	Presentant to to atomstade target ship		Liber -
	USS Helsever (APA-65) to facilish power (p	204 !	Foured to .57 <u>22</u> 0.
	hoist archer.	1122	Forward ancror of UST-220 housed and se
1330	Moscod alongside <u>815-00</u> +.		cured. 158 Preserver (AR%-B) (Oak 137-220
1540	Dedermay to USS Collessina (NO-54) to the		30 1Cm.
	on toel.	1174	Curat of UST-220; underway for anchorage
2747	Anchored in berrn 54 after sufuniting.	3152 3370	Anchored in beach 124.
LT ALGUN		13.00	Grade ( 1459) .
2824	Provide for Reservicents of Contab	1578	- Koosed to Butty. Butty: anthor toused, disconteneed
COIN	Enderway for generativania to furnish power to baist anchor	11:0	
2852	In whitely of Pennsylvania, awaiting		- preventiliser 1725 Manuster 1872-1015 took Barne in cow.
- 3 44	action to franklight and working party.	1605	- Underway to most ulongside traget whith
6920	Offices in these of writing party some	1142	IST 545.
	abnard.	1657	Moared to LST 145.
1022	Comble to ferrital generito both stateors	2835	ust 545 aucher nelard: and Clamp 1895 731
	officer and working party left ship		coak CAT 545 (p. cmc
0304	After taking on water from Wildowh, an	1900	Anthored in berth 159, Blaint,
	choted in 54k.		
		29 Aqayya I	Annimored dt. Defure.
18-23 Magues	Anchored as before		
		30 August	
24 August		Ď645	- Underway to go alongelde tanget slibp ( <u>C</u> Q)
Q841	Underway to go stongside Barrow to fur-		Thind IDD-404) to take it in tow.
	mish power to boyst And bouse ap. mg.	(1C)	Moored Alectative Phas.d.
(175-1255	Roored to Barrow, hoisting and Housing	3916	Coderway from Minishi en route to Kweja-
	psyhon.		lets ales thing to row.
1015	Hoored alongside target shop this brule		
	(RPA-66) to heSph and house enchor.	1. September	Accaved at Kwajaleth
: 137	Pasived power 35he to Brule.		

J September	Underway (the Keststein to Deach Matha) With Ra <u>tah</u> in raw	2 August 1108	Anchaded in Seath Kibe, Biking Acoll.
	<u>uss selvanda</u> (akn 40)	і Андонс Осая	Archegical (or perior 46, 0):10) Accept
RMAN ALSI . SNOT APRI LOC	Arrival, ly April 1946 Separture 25 August 1945 35106 27 man (48 km) Mt	13 August 1915	Crew of issget ship USS_Caseonade HMPA R5: secences aboard for by Liniang
Appace iver the second se	cutton: 13 pmb (11 sm) 2 en Locathen, Pugal Snund Tearance: 1 Decamper 1946 (Seattle)	25 August 26 August	Coderway from B34(n) to Kwaja7e(n
1456 Un%c .na	, i un <t∣ou< td=""><td><u>0</u>550</td><td>Anchored in Decth 112, Kwajalejn</td></t∣ou<>	<u>0</u> 550	Anchored in Decth 112, Kwajalejn
l.ē.S ( Sinkt≜alu Sispen <u>Po</u>	KA cauge ship Sylvania was a neader of TV Servey Chith, USS Bolerce (Auch-99) was y designated as intratannolit cargo ship Jerre's department following Twon BAXCA task over the handling of intratanali	27 Nog.net 2453 Fai bar - Dai Ca	Underway for Peerl Harbor.
cargo.	case over the Henoting of Theratrenist	14( <b>0</b> 01 <b>.</b> K4( 4)	1 M : 144 UZS 2019418 301803 (00-)901
SM01 A811 (1	203y: 49001		USS_TEL_MON_CARD_B}
28 June	Anothered an Hongelap Ale().	Green Stud I Stelnt Agoli	Archeal Sy 14 June 1946
90 June 1542 Viola	Underway fice écsgedap Accil en route Lo aceó PeC≥ard,	Shei Aill Lor Shei Əkrli La Ceconiaminati	Departure: 15 August 1946 alton: Anchored at Kwajažejn Hollton: 16 mml (39 km] HE Hon Location: Los Angeles Franzica: 12 December (996
U IGO	Accived aces Parkard.		ice 21 Docember 1946
0105	Compensed steaming in company with USS - <u>Remain</u> ce <u>h</u> INGS-66 ro john TG 1.8	7456 (101) 800	1 tonation
0925 0925	Julied To 1.8 in rotates to extiten in coste to Pongelap, Pongerik, Allingi nat area to conduct oceanographic survey. Commanded stogating to variety, roursey, to	1.8.1 U	e repair ship <u>regam</u> e was a eerbox of ru Repetr and Service Units, it was part of Remande and repair facility.
1024	conform with occurrency of white the investigation of the conformation of the contract of the conformation of the contract of	5501 A94 F ()	July, C950)
	gesti aluits.	l July 1630	Antiected in Berth K 16. Reagalets Hasbur. Redetway en route Rikisi Atali.
2 6 Jusy	Continerà acemagiaphic survey.	2 July	
4 July 2100	Ceparted Honomiap Mtubi area for RARINI Atol?:	1507 אורט ג	Anchor+C an Gerik (465, 81kin) Atoj .
5 July 1105	Anchorni in berti 7318, 918(51 Apol)	1657	NUMBER OF A STREET AND A STREET AND AND AND AND AND A STREET AND A STR
1100	AND AND AN EFTAN FAIR, PIKINI PLOT	9 July	
6 23 July	Reatine specifiers not nowiving thight	1459	endbysed south of boild 179, Bikini.
Shet BAK!R (2	4 July, 0834)	12 July 1758	Anchored in Secth 1465, Bright Wayboy,
24 July 1424	Cind-stway permovaling to survey area of	Shel BARLR 12	S Jely, CATS)
	Bikini Atoli	24 July 1405	илдержау боор мікала мараля во Авлараар
25 July 0600	Sceaming independently on coute so acea Parkess, conducting oceanographic survey. Took station in column formation astern	<b>N</b>	Moji in company with Crown II. (70) 1.8 7. via Parkard area.
0544 1400	of USS San Marcos (JSU 25) En route to Rongelag Aroll. Anchored at Rongelag Aroll.	25 July 1849	Anchased in Berth 10. Pongelap Harbor.
	eren en e	36 July	
30 July 1851	Conterway ister Pongelap Stoll to Abaini Acell.	0103 (e0e	dedetway Esce Honyelap to Bikini. Anchosed in Setth 1990, Bikini.
		2 August	
98 JULY 1001	Anchored an herin 40. Blain!	1615	Anciented between bertiks 3 and V. Billins.

# USS\_Telamon\_(ARB-8)

# USS Tombighee (A0G-11)

-

1		31 Activ	
1 Nagust (912	Anchusen po beres 1464. Ackad.	7635 1635 1110	Entword Rikini Luqoon. Noored altogaide USD Enorem (AO 69).
A. A		C-11 1305	the children and the state of the test of the state of th
.4 Augus: :367	. Appressingly the tweeting $\Phi_{i}^{(1)}$ (Miking)	1374 (695 1442	- Algongalice USG General (UG-6):. petty 570. - Augustate USG General (UG-6):. petty 570.
ub August 👘 👘			
1404	Britishay form Bilthe (art), 157 (n. tew for Teach Hasper.	: Augus) 082;	Vinletway
		CG(1,1,30A	Healter alongside l <u>eis</u> Meast Mostley (MG
No Aspest			<pre>28. Beith H12.</pre>
(124	Managershi (m. Sana 1967) "Na Amaran (Manafasa).	. 126 1523 .553 (1642)	<ul> <li>Mosted atomytick Cost of 166, bette A8.</li> <li>Mosted Atomytick (KN) guests (TO 160).</li> <li>besch (d2).</li> </ul>
	*22 ŤÓMBIČGLL (¥002-1.)	, NS	Applyane) (epity (4)
ires 5'78: 2	56	2 August	
Alkini Atolik	Annial's Sy 14 June 1946	(20)	Borlenanty .
	Reparture 21 August 1946	(q) ,a. '	
	(411a), 21 mm), 19 mm; 841	1.1.1.1.	Let La Ja.
Shot FACE	outher - Arunning as kengelap Appli	. 477	Anthonyd Detail Priter Rogin
	on addition of Angeled	4	
	Concurre 11 December 1945	4 Xuguns	
n Inali (17452)	nce: 4 January 1947	0015 0975 1198	- Underway - Messeri - Companie - 353 - 898 (e.e 689), 245 -
Take units and	1 Fue. 110-		50; (5 11).
The 245	Cline canons frontigher was a needed of 721.	1716 L <b>4</b> 56	Anchocof
1 8.1 9	Repetts and therefore there is provided factor	1415 (42)	Accounted to twenty 180.
for ste	tase force.	1504 (81)	Magnesi ala capatón 155 Son kontidge (AFA
			220) 5-139 277
shak 4304 (A	00°71 (9001)	:41.1	Anchoryl becch +J4
( Cuty		9 A.c. (1.5)	
	Ensered Atkind Lacess	221 101	Simon Ma Biles Kines
14:::		761	Alongside Prinz Fragen
144.5	Resnored in beach 341.		
		A August	<b>.</b>
2 taiy		2253 2556	Monied georgede is sanger ship 250 Fill
\$3 ¥2	Conference of the second se		TOTO TARK 93: 10 (Ascharge Constantion)
1021-1206	Maareet allonig (de UCS Syn Marceet (USE 251)	2995-1514	Tanges verse: CC 004 roosed searboard
	1#: FB 946.		For the Office Checkman and a
a750	Anthoned in house (a)		
		1.0 Wedning	
J cuty		1,560,1745	
04931	Children way		u):_
(016+()00	Alongelde Lange: Venaer, 700-00.		
2466 (1555	Muoriet alongubon USS Prenque I <u>s</u> te (AFR)	AC ALCOSE	
	441, berth 95.	:.14 1322	<ul> <li>Alternytetek (Langet) (Alty Little Stawgard, CAPA)</li> </ul>
354C 186C	Alongside carges whip 055 £37 220.		612
94n	Amennessa perra JU.		
-		21 Kapest	
4 July		046	Security 30king according Mestelete
6510	Managers many .		
3941-1025	Alongsite Cangel ship 158 Jughes 400	A. ANNOVE	
	4101.	1.50	Anchueve in Anchorage A. Bersh F. Kwiji
,ent (mig	Wegend alongstate USS Carston Hell		lets.
	(U30 >).		
1352 (445	Also pide through ship USC Marin 941	2.1 Marchell	
	413:.	.116 LS/R	Although the server on the LSS Constant CAPA
			74;.
5 July			.1.
0911 (05)	Alweightige hanget ship Polon, Eugen.	24 Magnet	
•••••		0201 12.1	Alongside Bladen to Mischarly Environments.
Frank and the	further contact with target wessels until		stole has been a second of the building of the second of t
ATTAL RAKER	- saraasi sasaasi —a a sabayiy araayin alkin	> Logist	
ALCOL BALLER		1656 . (.)	Elemente Rianara
14 No. 11	International Statistics For Concernance Areas	1.76.111	Microsofte Microsofte
Manager 1	reparted Stells for Aboy-Tep Atol	-a b	
Shall 10- 6	and the task of the second s	CP Acquest S.C. Loca	Line of Line D' sides
star set a fi	25 DERYS TUDEN	501 (nca 11 1 1 1 1 1	Alem y-lde Diad <u>er</u> . Nicean Mark (nachand
16 1		1752 1945	Alenaside Colland.
75 July	hashes diel Games in Marti	6	
1852	Antinesid al Gongelap Atril	<ol> <li>Corpore prices;</li> </ol>	Second and the last the second second second
		1002	Departed Kwajarein for Wearl Harber.

# USS Tuna (SS-203)

U <u>SS_TRIBPE</u> 100 4031		6 August	Sprayed and washed down by \$74-192
trew Stre: 135 Bikini Atoli Ariiyal I žunn 1946 Bakini Atoli Geperiore: 20 August 1940 Liew Lacditum toi 550; BALLE 155 Beyfikeli (APA 33) Shor ABLE Tocalion, 10 met 435 km; ME		) жидина	Criger feadings sopside averaged 6.0 2424 Nours, Topside Balloum 25.0 8/24 bours, Below deck average 1.6 2/24 bours, bplan orck Pakimum 6.0 8/24 bours.
SMOX BAREF LO	ration = 1,320 pirds (1 3 cm; HNM ny 1942 trot Kwo)gleto	e huqusi	Heidge organistration 2.4 R/24 Rours. after deck house 0.8 R/26 hours, tartait 0.4 R/24 Houses sprayed and washed by (53
lath boos and The des	tionalion tiogvi frippe was a souther of fit 1.2.3		Activity (ATE )48)
tibessiooy Caligeri V	er Unds), Nestroyer Pivision 4, 10 was s eksei for Hakky	9 AUGUS!	Gelger southigs rejunt. Sorenastle avez age 0.4 3/26 hours, main dech averege > %/29 hours, engineering spaces average
Sever Adit 11	2019, 890R)		0.3 F/24 hours.
l July	Steaming Technological and area Hurkson With 638 (Attray (Chi)24) and 1885 Technol (RP 72)	10 August 1028	Commanding offices and inspection party about the folger and drops togside antenne
ONEL 2 July	Anchored in Berts 141, Bikini Logoon.		2.0 2724 hours topolity maximum 20.6 2724 hours (sto): below dock sverage 0 1 2724 hours, delow deck maximum 2.5 2724
i 127	Kachsted is beren 1398, Biklei.		bours: invide ∎: gun mount 60,0 8/24 bours: No information available regarding
ti July	Anchosed in berch Vol. Bikini.		time aboard frigge (Note) topolds expl- mum (inied in the boarding reports be-
16 July 1228	Upderway to shift besine.		lieved to be in error, since the mortman copelide value on " Nogust was 15 R/24
11:3	Anchored 618 yards 1558 meters) from far		bucrs )
1095	ger ship USS Nevada INE 301. Sevua mea waxe urbana(ed na yaa Raytse)d TAPA 312	12 Acquet (fex)	Tyleppe costs if was ferred to U as lighter DBD- 140
663A 13 SetA	Applicative 510 years (46A portable) from Serveda	15 Acquist	Statt fusperition completed on velope and wade svaltable for disposition by CPC
1350	Truncterred there and to Baylintd (or transfer at persuanel orner to test		1 i
	KUNIR.	26 August	read from Rikin' to wajajelo by ATR 67.
1005 100 July	Completed evecusion of all personnel to	12 Acquise	Archveið at seajatenn.
	Bayfagið for William Day tehearsail.	78 August 1700	Trappe decomplisationed
19 July 1432 1445	Reboarding teast resurned true BaytSeld to per <u>Prippe</u> in operating condition		nīzs īnamā (ze 505)
73 July 1486	Swarnalist 40 men is <u>Rey</u> flyto.		(1 Arthuaz: (10 May 1926 (0f4 - 27 Kugung 1946
24 July 2014 3095	Evacuated wit censising personnet. All personnet reported aboast maybeld.	Crew Lotsillor (Krew Localison Spot Advillor	n lav Shal 480' - 935 Bottineve (424-295) 5 der Supr RasiR- Soliteray 2015en - 2,194 yards (2.5 km) NHS 2:alten - 1,890 yards (2.5 km) SSM
Shol BAR(6 )	45 <b>J</b> ulγ, DA)5)	DecontAminati	ion Loralion: San Francisco Mober 1949, off southers is thermia cos.L
78 July	tom reported beiger reading, of 0.6 0/24 Nowca at 29° feet (76.2 priors)	Fact Upit and	
30 July	user reported Gerger readings of 1.5 5/24 Nours at 10° thet 110 5 enters)	Raf 10v	Hentitis Supervisine Civisione (N), is may a Vester for CROS9SNACS
1 August	AZA 192 datested to proceed to target ships US <u>S Mayonn (US)-0020 and Trippe</u> for a trouwigh wathing with high pre-tare	Shot Aitt () 16 Junw	Juðg. 6900)
1016	Rosen Ata-152 kompletes for work on Buyandi and	1908 7210	Second evaluation mightly from CUTE ). Regard to a constantion with Submations Sup
14 IC	Began work on Triggne Rection Triggne cales crossifered to 2/8 Beags (2009-2010)		påenern of Sushikations to Takgre Vesselv. of CROSSEGNES Storphill Starbailet (englin the 11 Met and 6 pl/Asens in accordance

## <u>1155 Funa</u> (SS-203) 30 June

# USS\_Tuna (SS-203)

	wärk (1761), Operation, Plan (1460) ind gro Geoded to Boteltheau foe platesing.	(539	Found: disected Splats to remove Tunals, anothers, stern contents struct
1.5119	······	1502	https://docs.text.co/iske.abstacks/recovered traw Taga is wat scalage off fonstebul
1529	USS stillet. (An 1997 opdeted to phote water		falond.
	around they carefully before bounding	(6.29	Kriat proced postulice to T <u>u</u> na.
	(Reference 6, p. VII 1-12 A)	: 250	Completed operations - Loderway -
11.62	Ellan rebuited TanA to: boa:ded		Etlah reported us, anchors had been re-
1.545	Ellar reputied Tups Gefore 5 in (Befere) courtes poly Vor 1 (2000)		revet, all car to be surred off. (Refe) enverthing, VCC 7-29 (S).
	the complete the second	1745	- 488 Chickasam (AFP 53) directori to toto
2 Luly			form his tow to have in los of kartinger.
Č774	Et lab proceeding to Tara.		inford and in they its archnes when ent
:739	Right separated twarding least in Turn		sing sher aus (Reterence 6, p. V)) (
	(Reference 5, p. VIC-1-22 A)		AL #5.
2800	Salah reported Cate Geographics Herberg The Salah (1997) (21:45)	1045	<ul> <li>Chickwards imported to a section 4.5 theory for objective of testing 251 (References 6)</li> </ul>
1147 2425	Comparing office: ratio(appeal monitor,		μ. V((-1-)) BL
	Three officers, and thirty and telearded		5) was de filed that evening that all te state of the set of the set of the set of the
	<pre>chaps fractorpression = "Aughternast restant, commenced togets; courtine</pre>		<ul> <li>Maining Seliant terms of Tuna chools for blown devicement 6, p. V(fri)(35-8).</li> </ul>
2610	Second Second Contraction Contractions Second Second		arown development of privating (j) give
2010		25 July	mungwag distanted to want down Supa ables
2 buly			Dicelog 746 Collact Locks (Peterenne A)
1545	Criterway for USA PLICED 478-134		р. V(C-J 06-Ы).
1645	manied to target outmanitie the concavery	0307	consider washed, were preferred to p. VII.
	The 1962 in most always de Pullen to Ab		[ 43 P): Getger Lendtry 2.5 R/24 Points.
	k barisge (22)		Refurence 501. Prior to Hashborn Grager
A			reading A.C. 2724 Pausa.
a buly cate	Codermay to: antibackie	1928	Windgeon provides and an index of a second s
1015	Anchored on SERIE: Lago A.		<ul> <li>Tubb completery verted, Crek veryes were secured.</li> </ul>
		10 00ky	Sign in house ( 1400 - 48) took alward
Shal SAFE + 1.	AS Duly, Certy:		Matter, (AP-1) coarding team, shen pre-
	• • • •		creded to target subburities tung and tOS
25 2019			Skate (SG 0.5) and easted down even high
Ee30	1956 #1dgech (AAR 3: Anchored the star		pressure streams, taking seadings before
	byard beam and composed subsetgence	1/25	and after Againstone &. p. VII ( 49.0).
• •	operasion. Time securid for submorgence: four offi	1.25	<ul> <li>Adding and reported readings on Turk being weaking right. No appreciation changes</li> </ul>
•	cess and second an subscripting the second second		afters washing fown with kennetters and
	Niferon.		1 suffler (Herecorder D. p. OL) ; Mr.H.
. 15	Record compared working Page for sub-		•
	mergence in accordance with instructions	<ul> <li>Sally</li> </ul>	Civen a lye hawn (Peterence 4).
	c) CROSSPORUS Sympositive Shart.		
1400	Sometogenew completed. Four officers and	t August	Companyation of the second state of the
	Zenalulu; Jime goneberked oor Bostanees.	1741	<ul> <li>Commanding officers, 1 officers, rpdio Logical monitor, and 18 emission men</li> </ul>
1.1.1 <b>.</b> 1			second end decenced tention by you
.:)a	USU Mecladows LARS C2x becaud great from		reduce and huseralles of hear.
	aten of Tuna -submergeds. Water vor-	27.5	Secured laws and everywhere, Below develop
	contine time. Also a compact was received		culturatively within this wave formage
	man one of the subserved subserves		was really taken the forence of t
	(belleved to be Tuna) was sighted to bis		
		/ August	
	pp with this ward watch to the test	5950	<ul> <li>Communication afficient afficiency, and along the real countries and known included to</li> </ul>
25 July			construe inspectate, tectasgu and deciv
0974	Zerlahmen stigt for tural VI submerged prot		Feature to work align forth the alegest
	cont apparently indamaged (Redistance b.		coll equipment was operating and ware
	a Vil i 20 07-		represented there are no and/ration as
10.5	Ups counter (Max 8) confident types water:		préliminary insperitors that any directel
	aerael alstantie; procedure, Gelgus read		tal equiptent hud been duraged (Refer
	tong B.C. R/24 beacter we apparents damage		ence ECL, Type was doe name as young
(645	(Reference ID) Reclaims: Congenied staffered Toron (Refe		<ul> <li>With the setting of the setting of the set /li></ul>
	erecte 6 p. VII-5-74 St	1012	Secured stip and evacuated.
	- F		
28 July		) #UK2671	
1945	Reclations parsed carger submathles Tupa	(19 <b>j</b> ə	Costanding mittanee, officers, and easier
	and CES Centurys (Co. July). Ture stream		logical monitor repranded to continue
	signs of standing and stationard 10mm Chafferess() 5, p. V(1-0-21 B).		<ul> <li>Inspection: restlag, and decontactions work.</li> </ul>
	THE FEAR AND AN BUILT AND AND AND		

### USS Tuna (SS-203) 3 August

## USS Tuna (SS-203)

5910	Entrie stew aboard, Sociading woninor, Periodicalization process contracting Side Decontractions of solitenser work. Tura way before radiological colorance funder pressure built (Peference 10)	IC August 1920	0 X Z C
2626	Roas secured and everyaged.		4.
4 <b>Линдирс</b> 0835	Communding allignet, officers, radiology	11 1,09051 0193	c:
	cal sonter, and tree reburded to continue trapection, resting, and decon		:~ 16
	Control (on work Decontrol allon 2-4 reneed with sitester work and the bath	(645)	ĸ
	<pre>bor to idge: dam #0451, and ho() index (100 (Peforence 6);</pre>	12 Augyst 0820	e
1228	Poar secured and evoluated.		2
5 August			11
5945	Exeruitor officer, officers, radiological positor, and they recorded to continue	1670	R.
	Suspection, testong, and decontomination work. Officers and come of target subma	1) Jugost 0225	¢.
	(100 076 064)4 (55 3051 completed (******	• • • • •	Ь
	tary weld(alana) duty that date, Completed Imapection of circletos equipment. All	1545	Р• 56
	electrical equipment operable. Tuna con-	14 August	
	pretroy chrones up inside and will wronin- ery was respect except bow planes (Refor	vel.	Ç:
	ende sitt. Salvaser with administered (Reference sit		te pe
1558	Post secured and evicuated.	1630	15
6 August			
0905	Commanding Vifizer, officers, radiology del monitor and verse reboarded to	it Angust 0410	c,
	continue inspections, testing, and decisi-		:×
	familestion Wesk, Salimater wards lye rath for bridge, gun nound, and hull induit-	: 160	- 64 32
	Lion, enton dinzide sprayed or exten	1172	h
6945	(ndpol)an (Reference t). Commerced bettery charge	1150	
1545	Certained Isriblety charge.		
100%	Securitizati entiversionini.	16 Ampur 36 30	7.
7 Aurganit	u an file i sur sh		) te
5000	Companying officer and them with radio bogical monitor rebasided to continue	1550	6 9/
	Suspection. Testing, and decommunition		
	work Saltaster wash administered (Reive apre 4).	17 August CARD	C.
1515	Stationed the windowering watch.	•	16
1530 1679	Completed process of archaric anchor.	1610	25 115
3630	housed rearrd to buoy oft funcients Jacond.	19 Accent	
1465	Part masteries and golding open invasionation	2025	.:*
6 August		1559	54
0905	Commanding officer, officers, size and rediringical contor rebearded to con-		t.
	those appendion, rescing, and decontact	19 August	
	Shafits work, Saliwhiles wish administrated (Reference 4).	082ê	01
2015	Roat secured and evacuated		- 93 - 10
S Mepust		1660-1700	- 50 - 10
0915	Commandbag officer and knew returned to boar to continue decommentuation and te	3000	- 20 - 20
	pati eoris Cul≉vater easin administrated. Defygenen ål	20 жылына	
		1 V	

Boar secured and evacuated.

1620

- extracting officer and show resurned to polito continue decomination and reate week. Balewater wasn administered Reference 45 All Gelger genology below akly soleiance (Deference 10)
- scalading officer and crew recorded is out to continue reputs work patients. ash administered (Nefectate 4). Bertewydare (are bern 502) Ind

#### peranding officer and crew returned to car to consinue deconstanination and reatr week. Saltwater waam uderntscored Reference 4) call secured and evacuated

arowanding officer and crew resurred to out to continue decontaring loss gad peaar work. Actived Scal and evaluated.

exeanding officers and crew recorded to one to continue decombamination and reabi wajik. out secured and evecuated. Secured ber

ary charge.

## according affices and stoke retorned to cal to continue decreatamanation and in POLITICA WORK nderway to solf the terms. echored in a position combined remainant arget while USS Fillmore (APA 831. out securing and evacuated. secondary officer and they resurned in out to continue deventantination and co abr wart cor secured and evacuated.

seasoning officer and they include in one to continue decontantion and reati wute. ogt venued and evacuated

Element and come petitioned almost to be me decentambestikes work. ant nections officers and they economy a Filippore.

Ellness and crew recursed aboard, opened p boot, and resured decontagination ork.

situated inspection party about to aspect lanet par serviced: offlicers and crew evacuated o Fillimare.

20 August <u>Č350</u>

Oblicers and convertexted, postered de instantion work.

## USS Tuna (SS-203) 20 August

1600 Boas secured: of theess and crew evacuated to FEDIFORE.

21 August

2945 Officers and previneboarded and resurved the contractive flow access

Geoger readings aboved Juna ere littled in Table Alls.

Table A 10 - Geogen coaltings (P204 Succes) aboard 055 Lora (55-20 st.)

> •• ...

				37 95
	Манлена Торуѓе			27.00
· 40	gant +	. 0	9.0 <del>8</del> 0 :	
2.6.	Qu1 .	C 85	46-1	1.351
34,		C 85	•0.1	
4 4.		1.4		
÷ Au		1 4. 2 4. 3 4.		
÷	945 C	U 16	10	
)	d121 .		(2.1 (1.1)	
4 L.		C 18	(0,1	
3 R.C.		( 27 0 05 0 95 0 95 0 11	2.62	
13 Au 11 Au		- 05	: 07	
	- 1¢L2	- 11		
13 14 Au	9811 		•	
, 4 AL	գանից։ Հային Յենն	0 10		
6 NL	Gen (* 17	,		7,391
•			-	
Moles				
				الرواق
* No. 1 #A	anna avellation.			
tidati  0 tel n∵ tea areas	NE ALGENT and a segarings backen to meter) above Ge est Higher read where the thick	la com a Defigi Iste Letter Dif Chago verte i Photo volation	of of 2 feet 12 R/24 hours refed in livie of gathe and	4-201
			115'', the main	
146.001	ich blue des be	1344-		
506148:	Reference 1.			D D
72 August 28%5	anderway the P	Nagairta.		14 Ju
2) August (155	Acchoive Shi S anchoisegn	W: (2. J. 2A	worth <b>Fa</b> njalatu	in N
18 Mospert	orderenay to Re	Harl Harbor		
1 October	алевский кала	en Francisko	υ.	16 Ju
14 October	Revenuel Sur Sara	Paerwinkop.		
La Decenser	Decoar is slone:	<b>d</b> .		лы
	<u>us</u> s 1 <u>u</u> arl <u>i</u>	1 PEG CC1 8		27 -54

Crew Stop. 313 orea Stor, 300 Bising Angli Andrad, 5 June 1946 Bising Agol Occastor, 25 July 1946 Shot BBLF asathen, 32 mml (1922 mm) St Shat Basid Torathen, 49 mml (41 km) St

#### Decontamination isolation: Not contaminated, did not eiter Bikhol Lagoon ifter abot BACER

Final Clearance: By 77 Movember 1946

lass Units and Function

The destroyer Turner was a needer of TO LLE (have war Group). Destroyer Division 5: It provided patrol and place quard support for the Navy S alt antta

(0168, 4811, 11 July, 8320)

41 June

1611 Underway from metth & L. Rol Inford. Ree jalein, to point Tare with 058 Shangsi Le ICV-360 and USS Charles P. Contl (DD-8)1).

19 By order of CCG (.t. Turger detached from Definition of covered independently in contraction with (Syster Jimotheo plan for the stonic borb test Accele scenes was reported reinased by homoirs plane. No visual efforts of both explosion were covering from Turcer's 7939 incation. : 100 Regain pation, ling on station bein outside Alicket Segment. 1547 Aschored in berth Art, most keejalein. I۴. in:: Contornary for Balling Arolls. • 5 Ô6 (P Modred to Seath 324, Siking. Underway for this of ranger attack. Astronomical in factor 267, ittacted. 0605 0949 2618 Underway to Bet Paland with Shanget-La and Cently. Anthoned an Doilly A.L. But . Kwajaleard iisie. Orderway for Polosi Texe with Changes La Just Cecil uly Lecà Departed from Shangit Lig: proceeded to Point Able in accordance with operation craw? . :542 And oned in Solits (44A) District Cagoon, vly 1617 Cavierway in company with Shatgel to and Cert. for Kal Island, Knaja.elf. Ateki. 909 1009 Annabled in Detric & 1, Rol (sland, America) Jet 1 Kernel -: ï, Carbonesy from Narith # 1. Bot Island, See Sector Aconte for Mixton Atolie uiy.

bý25 Anthored in Serie A 22, 1996r1 AUG11

2) Dayy (123 Uniferway for Rol Island, kwajaleth Acoli

Shal	80CTK 17	5 Julie: 6835	
24 Ju	dy 69:5 1951	ancoored in becan & it soil (stand linderway to proceed in company with Sharge) is and Casti to Point Tare for Diatik cost. Sorthe order: C <u>er</u> it. Turget. Changet Get.	3
ىن 25	υ»13 1913	Tetaziet from formation by proces of CT- J C. Represent Schependently to Point A Communical multiding up carinae speed. To get K Mission was to assist the flighter direction in multipartites with drame rea- ract.	
	6963 1050	Attusted Maximum speed. Ordered by CZC 1.5 Ko rejoin incastion	
	1150	Medicaned Stangratic la taking plane guard station So 1.	
	1422	Hetachesi inco assigned doty with Shangis La and CHMOSHCOUSE Providend to copic Pranti Mazbot	
		<u>JŞ5 malmatjGH1</u> (00 419)	3
(this Bik Crew Trew Shot Shot	-1 ALGII I Localion Loration ABLE Eoca BANER Loc	16 Aritegi I Jure 2946 Iepariale: 23 August 1946 Ier Shot Adti: USS Bayfleid (224 )31 Ier Shot Bakik, <u>Bayfleid</u> Aliga: 2.159 yardi (20 km) Me Ration - 2.952 yardi (20 km) Me Mag oran Swagalein	
	The deals (Res) roya	Function cover Mathematight eac a common of TO 0.2.0 or Hair), Septrover Hivtsion 2. It had caboetd for the Steptronics Group's ex- a. Ut was a tables would for ANSE add	;
1 yin2	ABLE (1.)	July, 04001	
JU JU	ме 0400	Balçıyırlığı)t evacuation tompleted: trev aboacal Bayfleğid.	,
7 Jul	ίγ 1:40	1935 Su <u>nc</u> ock (As-60) represed <u>Bermerty</u> ht Gesger Sweet (Rederance 6, p. 433 ) 29 A):	
2 23	July	çrev abourd waxayragan.	
24 Ju	λy.	Crew evaluated to Baylield.	4
ŞFÇI	<b>2</b> 0466 (?)	s 3e'y, 0€36.	
29 JU	.!v	Gesgen zmaðinga úf 0-5 8724 Hevrs at 100 (enu 11.) Jackerss reportæt.	
29 20	iy 1013	USS Currenn (APC 27) placed u boarding Yeam on <u>Wayneright</u> Loetorence 6, p. Vil- 1-De Ry Average Gelger Teading 2,5 R/29 bourn, askiewe 3,5 9/24 bours.	ہ د
30 Ju	1352 1352	current reported bearding team back from target ship USS Bugford (NO 389).	

proceeding to wash down Wallwright (Ret. erender 6. g. VII | 52 B). Aumrage Gelger reading J.5 to 2 R/24 hours.

derigent reported positions toos returned 12.6 From Wainweight: standing by far instead-tions (Setermine A, p. Vir 1 50 0)

H July

August

- USA, Reclarger (RRS 42) storgality Mg/p. 1550 1612 ectons with boarding team and echiter applied belefing thereanizes \$. p. Vit ( 62 (P)
  - TSM message to COTH 5. TOSM and Redself 1961 isopected (target ships) Conjughan. Wein sythic, and Regipted states and below decks. Rediplogical conditions are such that perform of the cream can be put aboard for carrying out 058 decontantine. tion procedure issued (big date to pi) target vessels. Weinwright has about three to four feet accusulated leakage to engine come bijgent (Petermane 5, p 6-U 461.
- yalawinghi kawa taganfaringi fina Mayfiyihi hugu58 Co 16<u>5 Mena</u>r (APN-2071).
  - USS Clarg (ARS-131 reported proceeding to variate light, dent apparently on face :001 Case reported woke on Matmeright cosing 1014
  - handyhitty on deck (Reterence 6, p. 11.00 (di 5 a 1 i i i i
  - Ship's force clearing after engine room 1305 of wates and washing down togetow: ex proted to evacuate about 3506.
  - 1535 Geoger coadings in firerooms were 0.1 to 0.6 8/24 hours, engine rooms 0.5 8/24 bours, weather delk average 1 3/74 points. 1005 Dependent ship.

0800 this team alsoard. 1605 Serured ship. Weather deck average 0.6 R/24 hours, fire rooms and engine rooms 0 ] #/24 hourd, interior spaces about 0 [ R/24 hours.

- avages. 0840 Shop's ream aboard. Senseed obje, Tapalde everage, | R/74 hours: after director, 2 R/74 hours: enim deck, postside, frame 165, 2 | R/24 1630 hourse date and as and engine process 0.8 8/24 hours: Lower Level, starboard side. forward files tune, 0.9 9724 Hours.
- Juges h ship's team aboard. 0220 1623 Personnel avacuated. Topside average 0.5 R/24 notio: topythe marinum 2 R/24 hours: beto- decks average 0.2 8/24 hours: after engion zoos statuarel against hull 0.8 R/24 HOURS,
- Association 0910 TAME & SDOATC: Conge; reading 0.7 8/24 50414.
- Autorit. 0825 Ship's tees aboard. 1168 Socioted http: Topside Enclose - 2 45 8/24 learns, topside average, 0.5 #/24 hours (possible disector on paintly below deck

## <u>USS Wainwright</u> (DO-419) 6 August

nserage: 1.869 5784 biors, 50.00 dock mapting III: 2.98 boxes (2.200 progpore buildhead, over so skint).

- \* Angout C76h Shipis Jorde aboard. #706 #vectabled stap. Tapaldo average. 0.09 PY24 betts, tepside Equipter (c): 8/24 houts toop of directoric below dece average. 0.02 BY24 Fours Lotow Jord Daxted. 0.5 8/24 Fours const runge.
- ALG 0-1
   OBIC Ship is force aboard.
   IB72 Topolde specupe C do R/24 hours: evaluate 0.43 6/26 brans (mptmaxer) below teck average 0.07 8/24 hours: below teck texes 0.43 7/24 hours: below deck take texes 0.43 7/24 hours: below deck take.
- 9 Bugest Off,C State at and, 1900 Security ships reams evaluating. Discontinued decontamination work perdiag clostance by radiate Onlyer readings: topolde average 0.004 8/24 Down, toposte maximum 0.6 2724 bours cop of directory being deviced average 0.14 8/24 bours, by tow just maximum 0.34 k/24 bours, by
- [O Require 2624 Shift is Solido aboved. 1010 Topolde avecage 0.00 kr24 found topolde maximum Scilo Rr24 bours (part of #7 ap 1846), helper deck avecage 0.00 kr24 bound below 0.00
- August 1935 - Ship & Zean & showed on purplingtime cost day, seduced steam tube leaks 50 percent.
- the Registry Shaff temperations completed.
- 10 Angust 3923-11200 shtp://www.and.monithes.abgurd.for Set-Get Survey.
- 20 Acquest GROD 1530 Rejectivy of mainstright of the transferred to USS Gronge Clyment (ARA-21), Although men about to reparch store tipes.
- 21 Maguest CommanyDing offbace: applied with expecting packy fact tanget ship USS\_Tripper CD 4031 manufold for 4 thurs to them impaired and prepare fac toward.
- 29 Miguet Towes to Westmenn and resained for rediblogical studiet

Reducting Matrix-tight consistentiers when to achieved to other unlike at  $\mathsf{Kwa}(\epsilon)\mathsf{W}(n)$ 

055 WALK1 (00-321)

11mm 51cm 242	4 July
Baktol Beoki Jerios': 21 May 1965	::e
BAKINE Atoli Cepariere - 8 August 1946	
Shet ABLE Longtone . 24 per 144 km; No	5.C

USS Walke {00-723)

Shin BikiR constant (5 mm) (28 km) b Cristian San Francisca The Clearance, 23 Science 1946

Tage Delit and Turo them

- The destroyer walks was a meeber of TG 1.7 (5.) saw Patroll, Centroyer Six(stow TL. The shap was writerly respectible int conducting commercy after Enverys and incloingical monitoring during the operative Generographic cruthes included behythermographs and creangraphic soundings.
- Shot AD15 // July, 09001

35. ......

(2.9) Joderway of Great Biking Lageon.

2010 Acclude Sciences Mack.

a July Arst

- 0(5) Changed course and speed, left area Mark, promoting to atma Mudary, to take station for shot JALLK
- 0340 Acclosed on area Hudson.
- 0945 Secured evoporations,
- 1240 Set notifal condition Passes throughout object
- 1337 Attived at point bearber, 250°T from target unit LSS newada (NB 36), target 57 upt (P) cat. Thouget to reciprocat courses of 350°T and (70°T every 15 elimites to recath in variation at present profition.
- (877 (627) Commercies of Wating on Validous courses as valid us speeds to destroy fiberand object and to make validity-cal probe.
  - (%2) Taylog to, probing, Object to ester de stroyed.
  - 1940 Completed settempted protect
- 2 July Sode downwith systems pation, with 1989; USOUT: SO the 1997 had regime.
  - W/M Thermost on role. Asking suggloced crossing mil. Proceeded to started Bases of Jacque Righter patrol.
  - 0512 1827 Chapter A() engines and compared (aying to conduct satisfies) patent.
  - DB13 1529 All engrees stopped: loadersed rule/bog: tal probleg.
    - 1006 Underway for Biking with patient (mpu); -(ng energy system appendix to my
    - FIGE All employs one parts to be about probing with tuning both (herrispraph and probe.
    - 1024 Satylog to vicinity of any Renewslence out the et although
    - (5)) Proceeded to clear Statel Legeca.
    - 3649 Stopped All exames, Laying to at Konst Saker radiological pattern.
- July
   1109 1519 All engines stopped, on static Make: off (Web) Publy Commenced Faking bathystetic crapt ceadings
   J11 Stoppeded to built Abstitut for red(o)dg)
  - (a) problem
     (B)4 All engines supped, on station Baker for Autobleg(the Southing of Europi Pass
  - 1973 Commercial Edition (Contraction Contraction)

817 B(1 emphases stopped: Jaying to as possrior Daker for swelping(cd) soundings. 821 Communication(cd) system; sadation(cd) problems.

### USS Walke (DD-723) 4 July

1451	Proceeding to go alongelde usS	Offersen
	(L0 725) to prok up cadeological.	hast ru
	MOLS.	

- (a) Commentated laysing to off portquarter of 0 04(60)
   (b) Commentation (constantions of ) (1986)
- Press
- Ledd "courses inging to on station for commission soundings.
- S pary 1914
  - (51) Assisted to perth 140 South, Hawley.
- S July 1965 - Chidesway Scow Persh (SS South, Bikini, To take scenaryrophic soundings,
- 9 14 Colly Tools Advanced article (gene)/reps.

S& July

69(2) America in perith 190 (parts).

- Short MARRA (25 Entry, DBPS)
- 24 July 3707 – Codesway Konistku, SMKAR operations, pro secting to arms Mickey.

25 July	
CÀIA	Commence and noting can be a commence and
	spess to create within area itston on the
	acceld beab deconation.
9845	Hoth explored.
1105	Tefs colors, with employs stoppeds by inc.
	ra ter test probe.
(21)	Processly to rejet to take that the 174:
	and VCO liverature (OD 5940) in column.
1915	Comproved radioBoster: patrol
2140	Connerced crussing station #4 of downwind
	patrick stopping at intervals to times
	probe
2155	Scopped to itseet proce while crossing #4.
2919	Stopped to team prote etcle crossing #4.
29 July	Yook excerpinables and radiological
	woundings will be on downwithin patroit.
200C	Underway to Entitle Party to conduct Open
	arion Calgore Roceanographic and radio
	log(Coll probably Second Steel Amberial
	çaskol.
1243	All controls stopped, hyper to for oper
	ariod Colgaro
JM)]	And heaterst, provides harbit the Walking
1815	Commented lowering probe.
27 July	
1762	Jochorasi Sa berifi 110. Rikteri Rhoff) Tagk
	radiciogical coadings with protes
20 3519	• • • • • • • • • • • • • • • • • • •
:646	Anchored in berch 107 Works, Bakini,
VILL DV.	
D44.5	Scoperators prested breater of ratio-
	are lubry.
0001	all cooking: photo and radiological war- Storn tell White:
1054	
1054	Anchored in berrh 367.
11 5.16	
Dels Dels	Anchored in Section 899 North, Bittics,
nar:	AND YOR AN AN AN OF CASE NOT ON THE STREAM T.

- 3.4 August Test mesnographic soundings.
- 4 August 1139 Anchorod In Seath L South, 2018ball.

L Agenti

3633 Anchored in Gerth 196 March, Biking,

1011 Underway Sar atwiningraphic revise con sisting of sounding station at 60 cml (jjt km) televals netchard sing 1597 yest lengthede weristan.

8 10 August Tools oceanographic soundings.

10 August

8 August

1945 - Hodersony to cenderwalas with Destgoyee Signation / and proclemed of Poart Nachers

15 Jungunst

1200 Abored at Pearl Pathor.

#### USS MATCHEE (MIE-118)

trew Stor. 99 Biblink Useth Arrival - 20 May 1946 Biblink Useth Cepatture - 28 August 1946 Shiki Adla Lacatter - 127 net 1244 km SF Shiki Adla Lacatter - 127 net 1244 km SF Shiki Adla Lacatter - 72 mar (ST ke) fik Decontamination totatter, 5an induction Operational Clearunce - 12 November 1946 Final Clearunce - 13 November 1946

- Look Phils and Function The likest octan tug Menalpheve was a member of 7th 1 %.1 (Regal) and Service Culr) Menalpheve main tailored manatervance and regain (will belies, b) as sisted in decembration (regain work) excepts, subleage, tewing, and exercise suble work.
- Shud 49(4 [" July, 0900;

Ut Same 1420 - Neidesking fisch Alkons Sul resourcease with 1955, Nonsee (Atti-1967): AFT 20 to tow on Sovie so Keil(Alkin).

- I Jury
   0000 En succe loss @liktel Atel\$ to New[alvin pipil with BF; 20 to tow Colgo by] of time nerved on Nettron (Newnatcher Dir net [344 km] to the Antone Seach
   1875 Antone distance at the Seach
  - 26 Ancorred with ARS 20 (p. berrin 67 Able antipologie, Bwajalein.
  - 1412 Onderway with th ?)) to the for Bikint acust.
- ) July 1969 Accuston metric 199 A. Pikini.
  - r 1450 - Winderway (or Latger st()+ 033 Senatoga (CV-2) witte witter battge stortg politiside. 1575 - Anorad witter battge stortg stightsamt store Saturboga.
  - 1032 inderväy from slongslör Sarstoga, prorecelling to anchorage
  - 1446 Anchoired in beach 14"A. SSkint
- 5 July 6050 - Underway to issilwr 425 Chi?askiia (A0-54).

2 July

S July

## USS Wenatchee (ATF-118) 6 July

0158	Pooled peritside for ( <u>u</u> teskia	.9 Oak	
: BCD	underway from alongside Chik <u>essia</u> to as -	1400	Cast off ye 153 in beach K .9. Keeya.eth
	sist U <u>SS</u> Pockingham (APA-209) elongside	:020	Underway for Bikins.
	tanget sinty case Arkanyas case 130.		
;230	Underway from Workingham to Take water	20 GWD Y	
	barge Statuslangslide S <u>aratog</u> a.	05.60	Anchored to berth 19,8 Sikina.
-400	Contenency with waters loging along prototicade.		
3454	Underway to assist USA George Clyper	72 Saiy	
	(UPA-2)) with second stip using beyond (EP-	: 103	And Deed about to See Argin.
	16G.	:113	Jodernay (non égiéloge so 258 Chowapok
2610	Anothered in herit 268 alongside Clymer		INTE 100).
: 100	Anothered in Meril 1974, Adkint Apoll,	1423	Anthorial an merrie 1918, Bakini
A Cuty .		VADO RAKAN :	24 CL19, 0825;
6403	orgenery to apply Clyment Alongside de-		
C233	veda	24 July 1555	and the second second second second
: 23	the go accele of potential demo	5(4)	Weineway Prot Making Atok.
1.43	Underlang in go slongslide G <u>lyge</u> r. Moored slongslide Stymer, assisting (lyger	10.1	<ul> <li>Maneuversed to pre in dosmation with ships of f2 1.8.7.</li> </ul>
40	in do alongstoe cryser, assisting tryses.		er fil 1.e.r.
:201	Chief and the second	A Daily	
(413 15):	Took of steel place for cather stap 055	2015	En source to Hongelap, Matshall Islands.
	Sait Lake City (C4 751.		observed atomic seeb nias:
: 536	Lodroway to go altrephile 1223 take City.	1505	Auchured in alcosity of Serth A. Roognier
1555 1625	Worked to SALT Cake City to deliver steel		L'all
	plane		- ***
1945	An reced in Decth 19.8. Biknyl.	30 July	
		1.1	(indexeasy with \$2-7)) modeed to startward
9 July	Regite activities, not involved with		alle en rosse to bastn! Atall.
	target vessels		
		21 Jaiy	
<ol> <li>Coty</li> </ol>		2775	Ancipaed to be Us .32 A. DIA(05 Acol.
2055	Undermay which LCT 1952.	•	
0100	Moared LCT-11/ alongside LCT 1941.	i August	
2015	John way in Prail Sciant	548C	Commenced valuate contations of submerget
1352	Anthored att theo fallend.		105.
1046	LCT 1190. CCT 2155 and 14% 4.2 secured	, 455	Made oil preparations for geniting order
	in statboard site, proceeded to USS Cretz		YBY.
	(A)( 11)	:573	- underway with the to the to designated
2500	Case off all flues no Lots, proceeded to		disposition and a
	Breye Stiland.	1610	Let to LEN and allowed to sink as di-
1607	Took 107 1317 14 164		740100-
0641	Took tadget teached to bin' in tow.	1 10 1	Anchored as set in 151k, Portal Apoll.
1704	could off all lines to out like and com-		
	13.11.	7 Vidate:	
17.11	Androred in Serth 19.8. Hikind.	13.5 Lata	- Cutelisted Kalwaye operations on reached
			Carges 2014 1855 187 175
11 վակը	Operated in Webbin rol Involved with	0.492 /2900	Asserpted to new bearbod USS 13t ALF off
	targer knowning		beach.
C2 doly		A ALAST. 44	
0920	Mokied alongside Nevada.	1612	underway, commenting operations of control
6942	[CT], 429 August allohuside situated quart		:51 All off beach.
	(#)	0627	ST-R 7 pv. led off heart.
:045	(AS) DET DET 1470	2603	Anchored in Serth 61. Biking.
1047	Enderway to USS Severn 440 to: For water.		
1255	Anchosed in bergh .PlA. Biking.	6 August	Realized draw as a set and that a set of
1-23 1813	Rootens to Kervela.	1351	Received 556 peaces (225 ktilograms) of
(67)	Aschored in berth 1928, 93king,		lye from USS Pollog (MK2 AF and 520)
			pounds 1275 Millingrams: from you clowy
1) .1.17	the set of a	1.004	(Au85-19).
1013	1.11.182 movies to Starboard Transferred Army undeator material aboard	1685	<ul> <li>Ji dealway: Not: decontemposition operations: An element for large AND - Children</li> </ul>
1042		1610	Abelieved in 16515, 559, Biking,
1055	(AT )487 Technology (non-sloopsing int (1887	2 August	
1213	Underway (com alongside 1977-1987 Anchored in Densh 2008, Biking,	7 NOS138 3 135	Statementy its decorrectionary end on othe
12-3	LICT 1877 Average Constantional Alian	1.15	specified sarget ship.
1.1.1	and a registration of a second second second	. 125	And Wind in Secth 198, Bikini
19 201y		1250	under way for decentrations from work
00t:	Underway for APTI-X with LDT 1277 in the	1519	Asthough in Secth (Cea, Bigin).
0930	Case off ACT-LIVI.		
1125	Noo: Ad to YV-153.	9 Muchaet	
1140	Codection along the Third St. Tow Soc. Knowled	0756	Differency for decontractation work
	lein.		,

## <u>USS Wenatchee</u> (ATF-118) 8 August

0844 0915	Conducted decontamination operations on	0ec
0950 .014	saiget submarine USS <u>State</u> (ŠS JDS). Conducted devokrapination vokracion, on .	654
	carget subparine USB Darche 453 (54)	125
1205	Accesses to visitify at Lawradon (eited) Gederway for dependemention operations	
17.11	on Shate.	
1420	Serviced decases"Pression operations of Skale and proceeded to Res <u>ch</u> et	
1442 1613	Conducted descartementation operations on Parche.	She
1645	Anchored in Berrh LOS A. Wikini Atali.	30
9 August		30
1 7/2	Chárrany té activit (25) Dimin (AC (6) 26	
	teking taiget ship 63% Cotteent (APA 75) . To berth 190,	
1826	Anchored is nerily ICRA. Avking	
10 August		: J
1005	frankferges desyntantiastion tarwo to 107	
	7:84 and decontamination supplies is USS	
11.0	l∿ <u>dakay</u> ang (ATE AS) Anghora-di Sa berth (SJA, BSkint	
162.1	when may to assist rowing the reb off	
1643	beach Anthoned in besch 6. Bikir)	
2140	second to be also to the 125	
7945	Underway to enthorage in Secto 61, 10	
	sini.	
11 Jungarit		20
0010	Underway to take Arrain on the eith se When in beached (ST 1995.	
9215	Secured valuese operations on LST 125.	Sec.
0220	andoned to rettle, whereas aroll.	
1250	Underway, convended to rake strain on the ware to beached but (25).	24
1470	Secured volvege operations on LaT (125	
1.505	Anchored in besity of, Bakina,	
74 August		
ė730	Endermay from Ave-27.	25
6970	CANE off APA 27 (runn terget chip 1783) General APA 851.	
6955	Record Att 21 to portable of George	
1010	No brend (in Section VC)	
L3 Rogust		
Ú 753	Onderway to twojalesh.	
19 Magout		
1149	Anchered in party is, Kenjalein Abrill	
21 108 201		7B -
	Anthoned which sizes time on Skaig.	
10		F0 .
26 August 56 JU	Undermay with State in tow.	
092C	Cash off the wine [ride State and streeting	м.
	oy while USS ≴ulton (AS-II) took Skale . Shitow	
	11.00	14.1
28 August		
104C	Distances for Pearl Marbor.	25-1
	ES\$ 1040108 (AP-J)	26.1
Liev Stre		201
Rikson Archi -	Arrivel: 29 Mey 1346	
Shar Reit 100	Vepàrnure - 25 Kugust 1945 Alton - 10 to 15 men 219 to 25 km/ (	78 J
Shol Besta Lsi	calSor: IS Ia )8 ≪#1  78 4a 33 kml E	

leco: Seri	ntaminal¶ ntional¶	on Localion – Puget Sound Transform – 16 Tebruary 1947 (Seattle)
258	The cent Conserved abory 44	function Nipot: # <u>Nipoten</u> was analyzed to 10 [.1.2 Milarion Unit). The ship futnished labor al base fuci21ties during ran operation. Naterial
het	4307-13	0900) (C000)
10 JA	1 <b>7</b> 0	
		dedectiony for linear acres Graham Processing of various courses and speeds to conform with traffic to inner stou Graham off Siking Aloit in arregitance with off 3 Operation Plan.
Ju	1.0	
	, ,0,5,5	Kotowi column astern of 1235 Haven CAH 121. ordes of ships in column: Haven Maston. USS Hurleson (APA 671. USS Geneth Enisting (AV 141. USS) Cumber Land Sound (SV 121)
	3315	Ordered to proceed independently.
	1541	Anchered by period 32, Bhalak
	7655	Anchored in perty 97, Bittal Audit.
	71)2	Phrecios of ship Risectal returned on board
اوال		
~	5542	Analizand Sociarity 89, 000 10
ħo4	Rhelf (5	5 N.17, 09151
4 31	d e	
	1450	Underway for inner area Graham off Blainn Autoff is any ordered with JCK ( Operation Man Director of ship Materialis staff and instrumentation only accord.
يو ک	dy	
	:j	Yorsen rolume ascene of Basinson, Ocdar at ships in rescant Decision, Martur, Million, Oumberland Sound, USS San Marcus (LSD 75) and USS Alponytic Opt 5:, Colore Management on various courses and speeds to area Parch of JCF Lighturion Plan.
	1215	Munitive assumed subliced command of TG.
	(4) 5	<ol> <li>Busideson proceeded togeneously. Additional of berth games, Wische Atale.</li> </ol>
B JI	.10	
	INTE	Anitored in boyrn Kar, Biking Accel.

- July (355 — Annored as reptro (45, Baking March),
- July 1995 Accored in Derth (15, Martin)

Nuquia (1940 — Anchored in Secon 91, Alkini,

Nogati 1300 Doderwiy Corikwajaleto.

26 August 19400 Antopolet in brith AUC Augustein Arots 26 August 1900 Underway for San Arymotopo

WH(CONG <sub>L</sub> KINN	ETH, see iss klanste melijne (km ta	0400 0875 (000	Maccill M B(rin) ,square Conductive diving operations to clear Antipelanctic
	1 (200 <u>100</u> 000) (2001) (2001)	91-01 61-34-1307	Shifted tearings. Sonducted diving operations, recovering
Brenni Asolini	United of Spin Jack 1986 Legensure – V Segterster 1946	58K)	slipped surhor. Aprhared in Destription Siking Parbon
Shok BAKER 1: Deventaring:	ation – "Alino Attaine L natore, 12 en 122 em) SE or Location – Sectronofice Teargrop – 13 de Hebre 1945	6 (Cory (72) 1200 (2905	Nested in retter of tablet inter Eo: die - tog operations. Germonied diving operations sourching for
Unit Cleanar	cell fill Casual y 1982		planted insertifieds, recovered planted, Contrarients
'ase br)t and The su⊒r at This	-Funition Mathematics versuel ∯ySgrigs was a meabac 1917 - Detvers Unit: 155 metr Australia	2005 V July	Noticed In Section (of a Rising Harbor)
: Luted -	when the presence of the second	¢317 C: C	Transferrer undertwicker (relations) an griftiges vie meter (august)
i tebséria		:016	Sofermay to search for synkur target only (30 Moderner (20 4.))
Shok As.! ("	10 °91 10 °00 ,	1672	Appropried to brith it's for carbon opera- tions
30 Jur 9 ; 752	Solving to just further of $(2,2,3)$	1045 1346 1745	Conducted severy operations, searching tur curken Anderset Intel Andersec. Completed Layton deve point most around
5 July 1940	Anchones (or book peoplandipeoage, pedali) E bittipi	14.5	Romense, . Reserve in the straight sing.
2 July		11 Saly 0 Ste	Underway to go alongside VSS Fulton (#5)
.651	<pre>Proceeding to restary it surger address proceeding to rester it surger address</pre>	1547	(1) to transfer submitted to receive charges Transferred submitte resture charges that price Haunch to Fulsce while bying to
0630 643	Raitilisis.c) Boullos repeties aboutó. Respet periodan la curque culometare 200- Skate (05-201).	:::*	off Fulleb. Second to from period them to twent [6] over Andreson.
C6.5	Radiouqueal function coarded and in openied Seater, state found for the Settion Stort	(\$)0 (E.M.	Conducted diving operations, seatching for instruction and posteration, damage to appleasure.
<i>.</i>	the Skele : forward goet addee chain to Liver moving bury. Community rigging Skale for sowing intern.		Underway to proceed loss woint nose.
.935 ::57	University proceeding to associated Leoning - area to proch (Pase Receiver off teaching area form Sciand.	9911 0125	Completed (accounting four point ≥ or and proceeded to assigned antionage Archared in Leich 105, Bisant.
942 1646	Alkin' Measured Skale.	12 31.19	
1919	Hadiological tratol left for solp Anchemist (r Sector K. [[is]ot.	SALA SALA	Hoomed over slaks, target stip all Corr (tsin AFA 69) an perin 209 - M(kso)
All Cody	No front as before	1970 1140	rondsited diving operations, startling for instruments on Carlinia.
5 1619 1,35	The fire in an integer.	23 Cuty FELP-0470	Conducted Mixing Compations, seatisting
1715 CALE	Confected diving operations searching for stated intervents exclusion (sasted) intervents	8925-1655	fur Listocrembs on (ant)sile. Utdoswater phono acts party on board.
49.:	Androset in Letin 205, Pikint Lagoon	16 (July 06-11-16:5	Conducted steing operations on Carlisle.
5-2019 - 8040	Proceeding to neutropic carget array for alward operations.	1045 1645 : 445	<ul> <li>An isoted over Andorson is beeth (b).</li> <li>Traduction disting operations, unarching,</li> <li>For summer Aplenment strated Andorson.</li> </ul>
J0:5	transferred gianted instrument (a CSS - Kenneth Milling (AV 14).	15 July	-
0000 .870	Conducted Styles operations: recovered	16,0	Confusient (pring operations over long) can recovering the topology final confusion
1214 1420 - 755	Andrewsky ta shidt bentist. Confucted districtly sympletics:		Aud0(r.en.
:e30 : Cula	Moorel († 1843) (61. 1963)	16 2017 VACC 1545	Conducted diving operations, concerning account chaig from Andresson.
35/0	Videowiy se shiji (within Hostalisis) aşarı Asioni		

## USS Nidgeon (ASR-1)

## USS Widgeon (ASR-1)

37 Juny		(477 is20	Annempted ou sutlaxie Apoguni
1105 (425	Doe do Beel affred by open et losses several grapher	1607	whilie en conte to assigned and ten age .
	300.		commanding officer ordered concervament
1510	See bound on bening (Ct., Report		of childlation of treemaker
17.14		1.46	Annhund 1.700 yards (1.1 km) sheth of
III July	Not involved which tanget ships	1.40	terite are lighted for a first loss afers of
	an undered with runder of the		with y e alena
10 A A		50	
to here		2019	
. 801	Heared over oursens farget while 1995 131	2155	Osterway to area of tash feel feerboda
	Steel (AMR 51) In Selation 168	004.5	Secured exaptraction
		9956	Masted in victoity of funa.
30 July -		1014 1029	Office buildent, factors ver Turig.
ເຮັດປ	Commenced Could special Long. Searching	1137 1259	Washed down Tuna to cleat radioattivity.
	for Gallian. Budiological resistor (c.	1059-1534	Blew callins lucks on Contude.
	portral aboard by subjection with clying	7/52	Archored
	oper of 20mm.		Sweets 3/6 Siletrel Hartss; .
1030			de el com alterno obtento, c
	Second Firm diving operations		
1:05	Contestancy for shift one harage.	10 July	
1458	Mennest reveal Children by thinger while test	0,741	Poderawy to alve of everyed Destude
	Refule (APA-66).	1.645	Secured responsions .
1608 (645	Consected (01v309) Apr/AD3(00x	092211049	Mashed down Dentude for Instructionativity
		: 140	On protect of meanwriting offices containing
21 July			disabiling Scentrairer
CR04. : 2310	Condening diving operations over 0:211am	¢149	Are noted of the Extend.
1530	Androiss to ber (h 191, 2016) http://	96.0%	Anchesed in berth 6, 600ml Barbor.
1.35	New Yorks to Device the Second	y	wave even of bench et soler in barrout.
35		5 a. 10 a.	
55 (A)14		)) Jo∎y	
0.00	Represent a langed de manger submarine auge-	9014 1061	isteen toperand totgesto doom and follward
	Smaraven (SN 196)		bauvern soco on Denisda
0770 1001	Subborgs-d Scaraveg	#4DA	Undergeby to go altergation and each issue-
1129	Accounted to Derth 279, Miking		racycl ship MSS Rughes (NO-4101,
		1414 1500	Washed down Regness
23 July		1638 (313	Blev all hallant tanks on Bentsola
	Moored alongside teacht subzarine 133	4 1/2 1/824	
0661		1.00.1024	Pulled Destade Litcher on Seach with the
	Den ada (57-175).		use of twateling gear
0720 0610	Subtorned Contuctor	:928	Reviewed in Systems, Hiking By Date
1035-1504	Minopted to subwrige tarust subwrites		
	USS Skiplack (SS 1941.	<ol> <li>Aurj 250</li> </ol>	Andersed in the Print Republic
1606	An Nored Service 20%, Wiking,		
		2 August	
24 July		14.DC	Reported in twittle 355 - MARINE Marbory mour
0:52	Modered alongstde Skipjyck.		to stab A fam (AF th) for low for reports we
650a C747	Galaxier gest Till (g. Secto		
			of peebs
1200-0147	Submerged target submerine sus Duna (90)		
	2095.	12 Jungunt	
1215			
	Rediringical availating repeated atoms for	6945	Aurzohnet in Sezah 18, Auktoit
	CROSSIDATIS.	6645	ANY
inco		13 Angust i :	
inco	CROSSIDATIS.		
	CRESSBOARS. Non-Coreal an Seriel 50, Patrick.		erp 1922ar2
	CROSSIDATIS.	13 Noquet is	erp 1922ar2
Shot BAKER II	CRESSBOARS. Non-Coreal an Seriel 50, Patrick.	13 August 11:	erplestant Möğnam etremporet to turface Selpjack
55/4 BAKER () 24 July	CROSSROATS. Ann Forded an Seriel GD, Makingk. M July, 08353	13 Noquet is	epletari Midgeou etrempied to turface Spipjack Conduited diving specartons on Skipjack.
54/4 BAKEN () 25 July 2425	CROSSBOARS. An Orred on Seriel GD. Marine. M. July. 08355 Underway to join TU J.2.7 formation.	13 August 11:	Meplectari Midgeon whrempood to turface Selpjack Conduited diving reportions on Skipjack, record('s; turivegt base to yempathemity
5565 BAKEN E 25 July 0425 0844	CROSSBOARS. An formed on Seriel GD. Marine. M. July. 08355 Underway to join TU J.2.7 Cormation. Joined TJ 2.2.7 Cormations	13 August 11:	epletari Midgeou etrempied to turface Spipjack Conduited diving specartons on Skipjack.
54/4 BAKIK () 24 July 0425 0844 1121	CROSSBOARS. An formed on Seriel GD. Marine. M July, 08355 Coderway to join TU J.2.7 Cormation. Joined TJ 2.2.7 Cormation Accounted in South P. Free Island.	13 August 11 13 August 13 (0 1348	Meplectari Midgeon whrempood to turface Selpjack Conduited diving reportions on Skipjack, record('s; turivegt base to yempathemity
5565 BAKEN E 25 July 0425 0844	CROSSBOARS. An Local on Serth SD. Martsk. M July, 08355 Underway to join TU J.2.7 Commarton. Joined TJ 1.2.7 Commartee Anchored in Serth P. Free Usland. On wedges of commarking officers, cen	13 August 11:	Meplectari Midgeon whrempood to turface Selpjack Conduited diving reportions on Skipjack, record('s; turivegt base to yempathemity
54/4 BAKIK () 24 July 0425 0844 1121	CROSSBOARS. An formed on Seriel GD. Marine. M July, 08355 Coderway to join TU J.2.7 Cormation. Joined TJ 2.2.7 Cormation Accounted in South P. Free Island.	13 August 11 13 August 13 (0 1348	Meplectari Midgeon whrempood to turface Selpjack Conduited diving reportions on Skipjack, record('s; turivegt base to yempathemity
54/4 BAKIK () 24 July 0425 0844 1121	CROSSBOARS. An Local on Serth SD. Martsk. M July, 08355 Underway to join TU J.2.7 Commarton. Joined TJ 1.2.7 Commartee Anchored in Serth P. Free Usland. On wedges of commarking officers, cen	13 Angust 11 13 Angust 13 (0 1348 14 Engest	<pre>wpletian: Widgeou atrempted to turface Setpjack Conduited diving metcalions on Skipjack, consecting training base to yompatients and Gallast Tanks</pre>
54/4 BAKER (* 25 July 0425 0844 11/1 11/1 11/1	CRESSBOARS. Jan Lored on Serth 50, Martink. M July, 08355 Underway to join TU J.2.7 formation. Joined T. 1.2.7 formation Anchored in Serth P. Free Jaland. On wedges of companying allocs, cert perced distalling incoherated	13 August 112 13 August 1 1310 1348 14 August 10515-1522	<pre>wpletian: Widgeou atrempted to turface Setpjack Conduited diving reportions on Skipjack, record is; taivage base to yompatients and Gallast Tanks</pre>
54/4 BAKIK () 24 July 0425 0844 1121	CROSSBOARS. An Local on Serth SD. Martsk. M July, 08355 Underway to join TU J.2.7 Commarton. Joined TJ 1.2.7 Commartee Anchored in Serth P. Free Usland. On wedges of commarking officers, cen	13 August 111 13 August 1 1310 1348 14 Eugust 0515-1525 15 Eugust	<ul> <li>Biggeon attempted to turface Sglpjack</li> <li>Conduited diving reportions on Skipjack, record (%) salvage base to yampatiments and ballast lanks</li> <li>Enguged to diving operations on Skipjack</li> </ul>
54/4 BAKIY () 24 July 0425 0844 1121 1140 26 July	CRESSBOARS. Jan Lored on Serth 50, Martink. M July, 08355 Underway to join TU J.2.7 formation. Joined T. 1.2.7 formation Anchored in Serth P. Free Jaland. On wedges of companying allocs, cert perced distalling incoherated	13 August 112 13 August 1 1310 1348 14 August 10515-1522	<pre>wpletian: Widgeou atrempted to turface Setpjack Conduited diving reportions on Skipjack, record is; taivage base to yompatients and Gallast Tanks</pre>
54/4 BAK14 () 0425 0444 1121 ()110 24 July 24 July	CROSSBOARS. An formed an berth GD, Mariak. A July, 00355 Underway to join TU J.2.7 formation. Joined TJ E.2.7 formation Acchared in brith P. Free Island. On orders of communiting allocs, com- pended distalling incoherer. Acchared Scibertz P. Histor.	13 August 112 13 August 112 1310 1348 14 Eugust 0515-1525 15 Eugust 0520 1915	<ul> <li>Biggeon attempted to turface Sglpjack</li> <li>Conduited diving reportions on Skipjack, record (%) salvage base to yampatiments and ballast lanks</li> <li>Enguged to diving operations on Skipjack</li> </ul>
54/4 BAK1 K 13 0425 0444 1121 1140 24 July 24 July 0300	CRESSBOARS. Jan Lored on Serth 50, Martink. A July, 08355 Underway to join TU J.2.7 Cormation. Joined TJ E.2.7 Cormation Acchared in Serth P. Free Island. On orders of compositing allocs, cert resced discotting incoherter. Acchared Sector(1) P. Hikgh1. Sectored Sector(1) P. Hikgh1.	13 Kogant († 2 13 August († 2 13 († 1348) 14 Kogant 0535-1522 15 Kogant 0520 († 15	<pre>Wepletiand Wipgeouterrempored to curface Setplack Conducted diving reposations on Skipjack, consection, valvage have to compactments and Galiase Lanks Engaged in diving operations, Engaged an diving operations.</pre>
54/4 BAK1 K () 0425 0444 1121 1930 24 July 24 July 24 July 24 July	CRESSBOARS. Jan Lored on Serth 50, Martink. M July, 08355 Underway to join TU J.2.7 formation. Joined T. 1.2.7 formation Anchored in Serth P. Free Jaland. On orders of comparing officer, cent meshed distalling incohester Acchared Sertember P. Histor.	13 August 112 13 August 112 1310 1348 14 Eugust 0515-1525 15 Eugust 0520 1915	<ul> <li>Biggeon attempted to turface Sglpjack</li> <li>Conduited diving reportions on Skipjack, record (%) salvage base to yampatiments and ballast lanks</li> <li>Enguged to diving operations on Skipjack</li> </ul>
54/4 BAK1 4 () 0425 0444 1121 1140 26 July 26 July 210 441 140 210 441 1408	CRESSBOARS. Jan Lorged on Serth 50, Martink. M July, 08355 Underway to join TU J.2.7 formation. Joined TJ 1.2.7 formation Acchared in Serth P. Free Usland. UN veders of comparing officer, cer resced distrilling freshware: Acchared Serberth P. Hikket. Second Revognations Inderway to mort in visionity of Densuda Anchered in visitity of Densuda	13 Kogunt († 1 13 Augunt († 1 13 († 13 ga 14 Kogunt († 15 / 15 / 15 / 15 / 15 / 15 / 15 / 15	<pre>Wepletiand Wipgeouterrempored to curface Setplack Conducted diving reposations on Skipjack, consection, valvage have to compactments and Galiase Lanks Engaged in diving operations, Engaged an diving operations.</pre>
54/4 BAK(Y () 9425 9444 1121 1140 26 July 26 July 24 July 24 July 24 July 24 July 1405 1405 1405	CRESSBOARS. An investion bench 50, Marine. M July, 08355 Underway to join TU J.2.7 formation. Joined Tu E.2.7 formation Acchared to bench P. Free Usland. On orders of commenting officer, cere resced discolling treshware: Acchared Scibertz P. Hikimi. Second Evaporations Inderway to mont in vicinity of Densuda Acchared In vicinity of Densuda Accored In vicinity of Densuda	13 August 111 13 August 111 13 (0, 1248) 14 Eugust 0515-1525 14 Eugust 0520 (915) 15 August 0500 (915) 16 August 0500 (915) 17 Eugust	<ul> <li>Mighten arrespond to turface Selpjack</li> <li>Conduited diving repotations on Skipjack, record (%) valuage base to yempatiments and ballast tanks</li> <li>Engaged to diving operations.</li> <li>Engaged to diving operations.</li> </ul>
54/4 BAK1 4 13 0425 0425 0444 1121 1121 1121 1121 1121 24 July 24 July 24 July 24 July 1408 1405 1501	<ul> <li>CRCSSRDATS.</li> <li>An formed on berth 50, Martink.</li> <li>(* July, 08355</li> <li>Codesway to join TD J.2.7 formation. Joined To E.2.7 formation Acchared in Berth P. Free Island.</li> <li>On veders of communities office: cert perced distrilling insteader.</li> <li>An instead to berth P. Hikght.</li> <li>Sectored in work in vicinity of Densuda Antipered in Vicinity of Densuda.</li> </ul>	13 Kogunt († 1 13 Augunt († 1 13 († 13 ga 14 Kogunt († 15 / 15 / 15 / 15 / 15 / 15 / 15 / 15	<pre>Wepletiand Wipgeouterrempored to curface Setplack Conducted diving reposations on Skipjack, consection, valvage have to compactments and Galiase Lanks Engaged in diving operations, Engaged an diving operations.</pre>
54/4 BAK(Y () 9425 9444 1121 1140 26 July 26 July 24 July 24 July 24 July 24 July 1405 1405 1405	CRESSBOARS. An investion bench 50, Marine. M July, 08355 Underway to join TU J.2.7 formation. Joined Tu E.2.7 formation Acchared to bench P. Free Usland. On orders of commenting officer, cere resced discolling treshware: Acchared Scibertz P. Hikimi. Second Evaporations Inderway to mont in vicinity of Densuda Acchared In vicinity of Densuda Accored In vicinity of Densuda	13 August 111 13 August 111 13 (0, 1248) 14 Eugust 0515-1525 14 Eugust 0520 (915) 15 August 0500 (915) 16 August 0500 (915) 17 Eugust	<ul> <li>Mighten arrespond to turface Selpjack</li> <li>Conduited diving repotations on Skipjack, record (%) valuage base to yempatiments and ballast tanks</li> <li>Engaged to diving operations.</li> <li>Engaged to diving operations.</li> </ul>
54/4 BAK1 4 13 0425 0425 0444 1121 1121 1121 1121 1121 24 July 24 July 24 July 24 July 1408 1405 1501	<ul> <li>CRCSSRDATS.</li> <li>An formed on berth 50, Martink.</li> <li>(* July, 08355</li> <li>Codesway to join TD J.2.7 formation. Joined To E.2.7 formation Acchared in Berth P. Free Island.</li> <li>On veders of communities office: cert perced distrilling insteader.</li> <li>An instead to berth P. Hikght.</li> <li>Sectored in work in vicinity of Densuda Antipered in Vicinity of Densuda.</li> </ul>	13 August 111 13 August 111 13 (0, 1248) 14 Eugust 0515-1525 14 Eugust 0520 (915) 15 August 0500 (915) 16 August 0500 (915) 17 Eugust	<ul> <li>Mighten arrespond to turface Selpjack</li> <li>Conduited diving repotations on Skipjack, record (%) valuage base to yempatiments and ballast tanks</li> <li>Engaged to diving operations.</li> <li>Engaged to diving operations.</li> </ul>
54/4 BAK1 4 13 0425 0425 0444 1121 1121 1121 1121 26 July 26 July 24 July 24 July 1408 1408 1408 1507	<ul> <li>CRCSSRDATS.</li> <li>An thread on Sertth 50, Martink.</li> <li>Multiple 00355</li> <li>Coderway to join TU J.2.7 Cormation. Doined TJ E.2.7 Cormation Acchared in Serth P. Free Island. On orders of nameneting officers, compared distributing freebourd?</li> <li>Acchared Screenize P. Hikimit.</li> <li>Second Cooperations.</li> <li>Defended Encorporations.</li> <li>Defended Protocol.</li> <li>Second Depindure.</li> </ul>	<ul> <li>13 Keepant 111</li> <li>13 Keepant 111</li> <li>13 10 1048</li> <li>14 Keepant 10515-1522</li> <li>14 Keepant 10520 (1915)</li> <li>15 Keepant 10520 (1915)</li> <li>16 August 10500 (1915)</li> <li>17 August 10500 (1915)</li> </ul>	<ul> <li>Mighten arrespond to turface Selpjack</li> <li>Conduited diving repotations on Skipjack, record (%) valuage base to yempatiments and ballast tanks</li> <li>Engaged to diving operations.</li> <li>Engaged to diving operations.</li> </ul>
54/4 BAK1 K (1) 0425 0444 11/1 1930 24 July 24 July 2310 401 1425 1952 054 1425 1952 054 154	<ul> <li>CRCSSRDATS.</li> <li>An thread on Sertth 50, Martink.</li> <li>Multiple 00355</li> <li>Coderway to join TU J.2.7 Cormation. Doined TJ E.2.7 Cormation Acchared in Serth P. Free Island. On orders of nameneting officers, compared distributing freebourd?</li> <li>Acchared Screenize P. Hikimit.</li> <li>Second Cooperations.</li> <li>Defended Encorporations.</li> <li>Defended Protocol.</li> <li>Second Depindure.</li> </ul>	<ul> <li>13 Koopunit († 1)</li> <li>13 Koopunit († 2)</li> <li>14 Koopunit († 2)</li> <li>14 Koopunit († 2)</li> <li>14 Koopunit († 2)</li> <li>15 Koopunit († 2)</li> <li>16 Koopunit († 2)</li> <li>17 Koopunit († 2)</li> <li>18 Koopunit († 2)</li> <li>18 Koopunit († 2)</li> </ul>	<pre>boptweind Widgebou admempted to curface Setpjack Conducted diving repotations on Skipjack, consecting valuage have to compactments and Gallast Lanks Engaged in diving operations. Figaged in diving operations. Sequent in diving operations. Sequent in diving operations.</pre>
54/4 BAK1 4 (1) 0425 0425 0441 1171 1171 1170 26 July 26 July 1415 1425 1541 27 July 28 July 28 July	<pre>CMCSSROATS. An tored on berth 50, Marsh. A July, 00355 Underway to join TU J.2.7 formation. Joined Tu E.2.7 formation Acchared in berth P. Free Usland. On orders of comparing officer, cer meshed distrilling treshwate: Acchared Scobert2 P. Hight. Second evaporations Inderway to most in vicinity of Densuda Antipered in Vicinity of Densuda Scienced Densuda. Antipered in Scither F. Bikind Hureat Commenced distribute; freeholder; of Orders of commenced distribute;</pre>	<ul> <li>13 August 111</li> <li>13 August 111</li> <li>13 10 1348</li> <li>14 Eugust 0515-1522</li> <li>14 Eugust 0520 (915)</li> <li>15 August 0520 (915)</li> <li>16 August 0500 (915)</li> <li>16 August 0500 (915)</li> <li>16 August 0500 (915)</li> <li>16 August 05-1820</li> </ul>	<pre>boptweind Widgebou admempted to curface Setpjack Conducted diving repotations on Skipjack, consecting valuage have to compactments and Gallast Lanks Engaged in diving operations. Figaged in diving operations. Sequent in diving operations. Sequent in diving operations.</pre>
54/4 BAK1 K (1) 0425 0444 11/1 1930 24 July 24 July 2310 401 1425 1952 054 1425 1952 054 154	<pre>CMCSSGOARS. An investion bench 50, Marine. A July, 08355 Underway to join TU J.2.7 formation. Joined Tu E.2.7 formation Acchared to bench P. Free Usland. On orders of reamagesting officers, cert resced distrilling treshware: Acchared to bench P. Hikimi. Sectored to bench P. Hikimi. Sectored to bench P. Hikimi. Sectored in wichnity of Densuda Antipered in wichnity of Densuda Antipered in Schol F. Bikimi Hurea: Commented in Schol F. Bikimi Hurea: Commente</pre>	<ul> <li>13 August 111</li> <li>13 August 111</li> <li>13 (0) 1348</li> <li>14 Eugust 0515-1525</li> <li>14 Eugust 0520 (915)</li> <li>15 August 0520 (915)</li> <li>16 August 0500 (915)</li> <li>17 August 0500 (915)</li> <li>18 August 0500 (915)</li> <li>18 August 0500 (915)</li> <li>19 August 0500 (915)</li> <li>19 August 0500 (915)</li> <li>19 August 0500 (915)</li> </ul>	<ul> <li>Magnetic Antiseport to curface Symplex</li> <li>Conducted diving operations on Skipjack, record (a) as strong base to compactments and ballast tents</li> <li>Engaged to diving operations.</li> <li>Engaged in diving operations.</li> </ul>
54/4 BAK1 4 (1) 0425 0425 0441 1171 1171 1170 26 July 26 July 1415 1425 1541 27 July 28 July 28 July	<pre>CMCSSROATS. An tored on berth 50, Marsh. A July, 00355 Underway to join TU J.2.7 formation. Joined Tu E.2.7 formation Acchared in berth P. Free Usland. On orders of comparing officer, cer meshed distrilling treshwate: Acchared Scobert2 P. Hight. Second evaporations Inderway to most in vicinity of Densuda Antipered in Vicinity of Densuda Scienced Densuda. Antipered in Scither F. Bikind Hureat Commenced distribute; freeholder; of Orders of commenced distribute;</pre>	<ul> <li>13 August 111</li> <li>13 August 111</li> <li>13 10 1348</li> <li>14 Eugust 0515-1522</li> <li>14 Eugust 0520 (915)</li> <li>15 August 0520 (915)</li> <li>16 August 0500 (915)</li> <li>16 August 0500 (915)</li> <li>16 August 0500 (915)</li> <li>16 August 05-1820</li> </ul>	<pre>boptweind Widgebou admempted to curface Setpjack Conducted diving repotations on Skipjack, consecting valuage have to compactments and Gallast Lanks Engaged in diving operations. Figaged in diving operations. Sequent in diving operations. Sequent in diving operations.</pre>

# USS Widgeon (ASR-1)

# USS\_W11dcat\_(AW-2)

20 Kugust			US <u>5 W210</u> Cm3 (AM-2)	
1725-9810	Kogaget in diving commathers to reveage Skipperk.	Frew Vive - 428 Report Austin Anningt - 12 May 1946		
2. August 0107-1915	Engaged in diving operations to valvage	578351 Afoil	Jeculuro 19 August 945 Sation To Sin-1 (56 ang ME	
	Skipjer	Shol BAKER L	stàtion - Anchoned Al Gengelap Atoll Tam Lotanton - Pygel Scend	
22 Adijist 0745 jejd	Englished to subwage and diving operations		C'Herench: 4 January 1947 nra - 20 January 1947	
23 Kogust		Task unit an		
1641-19%C	Segaged in diving and distange operations an Skipjack	The eater distilling this Wi <u>de</u> t each a compar- THI S., (Sepair and Syrving Only)		
24 August 0710-0845	Forgerend the officer ( Definitions of Fallyng)	5161 MALE (1 2014, 0930)		
511. 284.	Selyjach.	30 June 1340	Underway for AMLE day reacoattor of St	
2: August :/:5-2015	Engaged in diving operations.		<ul> <li>kint Lagoon to atom forkerd indiana.</li> <li>Barns, sector ands 05591</li> </ul>	
	a paper in clear y contacted.	1935	Artives ofer Eachard (Sabates Paket).	
76 Nuques Cegge DRIA	Engleged to diving opprations.	1 0.1y		
23 August		060; CR/S	EventSevel at alcale prevaution drill Secured from acomic prevaution drill	
3645 2930	Fogerand to stating operations.	2845	Free "usered of guarants in preparation	
0021 1302	Altempted unsuccessfully to surface		for board drop. All prevailings langer to	
	sunken Skipjack	0930	protect crew duct lejury. Secured from quarters	
Zō zuguns		2352	Proceeded to area Carecpilluse.	
C705 1000	Engaged for deving course for a bet <u>pr</u> ace	273) 1746	Anisond prov Caterphilter, Americant in victory of borch 200, 91	
29 Acquet D725 (910	Engaged in diving operations on Skipjack.		sin).	
0177 .3307	engagee in elev y specialitess of supplies.	2.04 <sub>2</sub> 7608		
10 Nogasi 1240 1920	Коулдоб То бууйлу критетного от бибрудск.	-678	Analigiya) ta parah 310, Mikimi, Regio ta Casalih water Lubig avaporator Laba.	
i Seguende:		5 July		
N7)5 204Q	Sngaald in diving operations on Skipjack.	:025+1457 1441   1750	<ul> <li>CON-US interest alongside to involve earer.</li> <li>Stra Parke (US R82) exacts allongside to</li> </ul>	
2 September 3130-1240	ingaged in diving operations.	:05-1945	interior angles ATA ,20 mented atomptike to receive wa	
1124 1965	Attempted incommentally to sufface		te:.	
	Survey Oxipjace	1945	<ul> <li>Decrease of Stitlarbook on the American and an example mechanismal formations.</li> </ul>	
3 September 1:44	Nappinal completely suffected.	• 201y		
1135 (\$35	Mashed dower Sk <u>il</u> yjarij	1705 1625	<ul> <li>Ord: James <u>n</u>. Off[jps: Unit. (3) exceed allow-yade to sective water.</li> </ul>	
4 September	Mogred to Settly 205, 09kholt.	1. July		
5 September			yes 154 woorld to Aterbook the Wase; .	
(0.04)	tRoberway en loute Lo SesjAiet™	(915-2020	USS comp H1996 (ACS 10) recored to star board for wate:	
7 September		6940 (989	200 62 moored to Stategrad for works	
1251	anogred range to <u>St</u> epjack in teste Dil?. Kestalebo, altes Lucing.	1125-1420	196 Sha <u>haa</u> aano <u>n</u> (AA Gèr perited to stot Naard èan wateri.	
•		1022-(047	YMC 461 socres to post for writes	
9 September Dagi utta	Towed Skipjack to developk.	1450 2200	USS Testingnet (400-117 moord to shat ) Seath fac water.	
()[4 (651	Rankale party on meand ship for 19515 Logical clearable before salling.	1400-0414	with 25 manufact in part from waters	
12 march	-	6 July MAR LOSA	we we are to shark to remain	
13 Sey record 2012	Received wadio(og):al :loaranco for sell Eng from USS_Haven (AM+12)	1100 1345	Marty Martin to provide to remain Mater. USS LS1 8/1 moured to startward for ma-	
-	and store constraints on the		tes.	
11 September 0925 (J10)	Tested all ballast taken on Skiplerk	1340 1750	Facilies with USA	
1.995	Dedealing for Hear's Barbor.	.400 (167	PGF (16 reported to port file water)	

## US<u>S Wildca</u>t (AM-?) 5 July

#### 2507-1744 USS UST 989 moores culdward to 55T 621 for whiter. LCT 5154 new;ed to poss Los wath: LCT 5154 mored off LCT L184 for water 1558-1799 1603-1631 7 Jusy 0245-1055 ATA 187 monted to stathoard for water. and 29 meaned to prachward for water. 1475 (\$30) Ses-158 moored to scarboard for water. 1535-1625 & JULY 6924 0972 ymp 453 wooled to pretooard for water. Target vestel 102411 549 moored to seaf 10:9 1205 board for water. 1114 1422 USS Deliver (ARS-23) mooned in starhoard to: waser L#J1 1444 ATA 850 moored to starboard for valer. 1645-1740 Ata-167 monted to starmound for water. V Jusy 6855-1050 ExtF-1361 second to statboard for water. 1365 1150 YP 506 poored to starboard for water. 1203 1245 shis the scored to pracheatd for water. 1445 1572 Gilliss econd in part for water. յն վալդ 1214 1045 USQ Chilkespile IAD 541 Aposed to port to discharge fuel oil and secrive water. ymp-ql3 mooted to starboard for water. 1420 1610 USD Chowenoe (#72 100) pooled to star-1340 1632 board for water. at July 0651 undersway to go alongside target ship Priaz Experito discharge cargo water and bollar ferd water. 0829 Hoored particular in Right Houses Pring Eugen received cargo water, ten-menced discharging holiet fred water of 0615 1416 rectly face disting units to Prime Eugen 32 July 1000-1048 FOR 12 modered to starboard for water. YLUU EL 0350-1145 Prins Evgen received cargo water. Ersar Dagen second inch secenated butler feed water 1350 1418 Inderway to assigned beach. Anchored in herits \$30, \$18351 1535 1138-1825 FCM-1: poored to starboard for werst. 14 July 0817 1021 VMS-358 moored to starboard fail water. 12:2-1242 with the mooned to starboard for whiter. 15 July 0152 1235 LAT BI I montred to starboard for water. 0966 0910 945 463 weered outbeard for water. 6937-1047 YOG 61 moored authorid of LST-R[1 for Maker 24 Uniy (244 ())0 ap 616 moored to starboard for water 1600 1110 Lds srigh (AN 79) moored to pair for MAC P. 1825 Casgo water reliefs served from involving Water. 11 July 1110 Commenced pumping water from MJ port and starhoard Links due to write weller.

## USS Mildcal (AN-1)

]6≻1 (830	Converd 32 and 3) evaporators. Secured free pumping 43 port and star-
1410	bonid tarks. Commented Clutitting on M2 and A3 evano rater units.
1463 1463	Pumped waliwater cut of tanks #3 and #4. Underway for PongeBap.
an July Del2	Pumped out saltwater. Changed courves to return so Philint be (are ass)vjog at Rongelag.
14/2	Anchored in Borth Jrb. Bikter.
2] ,lu]y 2025 7927	Communicationspace selected from M2 star- board and M2 post Lanks over Side- Secured M3 disr311bng unit.
22 July 9900	Secured from pumping writes out of \$2 parts and starboard names tanks.
29 July 00(1	Conserved distilling on 43 distibiling only
Shot SAVER (	25 Jung, 08351
χέωι. •ς 00×5	Underway on stude to Rengelap Accil.
25 July S720	Commenced pumping salumater from all pact and sterboard lanks over the side
0754	Aschured in being 21. Rongelap.
6936	Sectored prosping from #2 part and stat board ranks
1752	We 32 approved to alastovard to discharge carge water and receive unchlopinated dissilied water.
480A	to pressed second of the 65
1810-2225 2245	Received cargo mater from MC-92. 201-92 rommonost receiving unchlastisated OSSUITES Meter for flushing Lunko.
26-24 Buly	Routine scliptizes.
10 3019	
0076	Wr92 second from receiving water-
0224 2437-0648	Compensed distilling in Al tank. YW-07 received catgo water.
0749	Waterway from Rongelap to Bikteri
2695	Archored in Beith 310, AUX141.
11 July	
4900 1900 1900 1900	Cremenced watering USS Sayers (AC 631. USS_Sungers (AN-91) according part tag water.
1765-1142	A76 40 encred to starboard for water.
August .	
1145-3685 3309-3417	LS <u>T Rij</u> complexit valge water. ATT 192 proced to part for water.
2420	Commanced fueling ship from YD-199.
1500-1545	YU-199 Ferresvert cargo waters
1610-1707 2640-1729	
1040-1-10	FOR 31 second as stanspard to receive
1650	Chepteled fueling ship.
3659	YO 199 undermay.
1713 1A24	PCM 24 poored to StarDoard aft to receive Mater.

# <u>USS\_Wildcar</u> (AH-1)

# USS W110cat (AN-1)

2 Applied		12 Angest	
69:5 0935	YME 661 moored to starbuard for water.	1210 1525	ATA-124 mooted to pert for water.
1207-1317	THE COMMENT INS BST MONTHER AT ACCOUNTED INTO	3152-12.2	(17-1)99 moothed to plusterard for water.
	for wares.	1940 1620	LCIRE 549 repredite starbeautifer water.
16/0 0870	After shifting period, upS takayes (ker	3531-1622	Obliges Mound to port the maser.
	<ol> <li>D poered to starb, and for water</li> </ol>	(6)4 (160	Clasp rewred to starboard for water.
2750-2844	ATA-174 moared to part to resulve water.		
	-	BB August	
) August		1914 1145	T =DigBee record to station of for water.
1555 2013	CCT (1551 mouthed inv storboard but makes.	1015-1455	1007D) (04, moothed to pure for wates.
		1507-1515	YG-199 monored to pert fai water.
4 AN2251			
09/0-0940	USS Nation (Aug 8) noticed to starbursd	EG ALIQUES	
	Sectored and	1840 (07)	S <u>hakomaap</u> i teepind to Aberbingtii Lotestii
1035 1017			tor Marvi.
	poard for wates.	D4,5-0958	-¥P:436 ≖xx:Ad () postviče (osward čov
112+1132	.CT 1959 etcied to post for water.		Hater.
1145-1840	LCT 1321 movied to pair far water.	.010 (095	104 23 moared to portaide losward fre-
			water -
> August		1632 1852	MS 400 models to starboard att for
2028-2949 1225 1130	SMS 450 Monted to starboard int wates.	1125-1525	Watter. Manager - Manager - La Manager - Land - Land - Land - Land - La Manager - La Manager - La Manager - La Manager
111111111	,005 Brasple (MAR) 1921 Foormal to start. Bootd to: water:	14.6 (444	- 75. <u>1956</u> -9 Moured to postalide for weter Dutten posted to sterboard forward for
1320-210B	Tombigbwe moothed to starbuard for waswr.	14.5 .444	Hater.
15/0-1622	US3 LST-59; Found to statematic for water.	1451-1605	
17.9-15-6	waa balawaa codaaca in bees ner wases -	1431 15.5	INC 354 FOOTHS to post forward outboard
e August		1431 1.13	tof water.
6862 (0):	US2) Meyoricher (ATA 118) march to star	(K.S. (125	
	beard for warni.	1	wale:
0900-1038	USA (Long) (ASS 13) monthed to putt for	1155 1846	121311 197 BERLEY IN REALBARD ALL FOR
	water.		water.
1135 4306	PSH 32 munied to starboard for water.		
1001-0814	lais herometric (ACF (46) mooted to post the	. 5 August	
	water	0955 1740	Tanget vessel LCT(2015 mooted to stat
1304 1153	USS Chickesone (ATE-S)) montes) to state		board (on wates.
	board to swielve water.	C210 2535	LCT 1910 scored to part for warve.
		1722 1439	COT 1420 accored to 107-1361 for water
<ul> <li>August</li> </ul>		37/03 .502	Blish moved to starboard for water.
684C-393%	builton moored to statucard for water.	1650-1910	LST $\underline{\theta}$ , $0$ madred to starboard for $\operatorname{Hel}(\theta)$
1062 (042	FOR 25 Secred to starbeard for white		
2411 1500	FCM 11 concreding blanbourd for water.	ia August	
.501555	ATR (3) nonted as stachward for Mater	0950 1104	NTA (Ro most-2 to stationard for water.
1121-1015	Ettan moured to starboard for wares.	2345-1442	207-1417 mouted to starbuard for water
A Associat		3453 3525	ATA 124 measured to scorbreard for water-
1056-1150	USS Survey (ATP 107: Dove-W to possible	(1 August	
1000-1000	for wate:	1040-1301	something accord to starboard for eater
1109-1125		-10 -215	NTA (92 moder) (in source for water
(15)-1445		:240 1324	YMS 410 meaned to part for water
:405 (NCD	LCT-1361 maared to gettacke for water.	19)1-19/2	YES-463 Douged to statboard for water.
19:15 1956	(12) Slove (47) 29; maryd 10 Starboard		
	ar where.	18 Annalist	
1702 13.5			
	Yet, 450 readed to part for water.	1822-3004	EADING 1862 Monited to goet for early
	Wet 46) resided to part for water.	8935 1040	1111113 1862 monted to part for early T <u>omblybys</u> received water.
9 August	·	0935 1040 1016 1035	T <u>amblogen</u> received water. Outrop moored to part for wares.
9 Augus: 1100-11500	forget wessel 102/02/01N moored to	8935 1040	T <u>raditation</u> received water. Outtop moored to point for wares. Two function(* insperiors cume on twosid to
	funget wessel tobic his monowi to - stanboard for water.	0935 1040 1016 1035	Traditation received water. Outtop moored to part for wares. Two futboals inspectors came on board to test for radioactivity and lett. All
	forget wessel todat his moored to starboard det water.	0935-1040 1616-1535 1450-1503	Transitypes received water. Outtop moored to port for wares. Two redarfs important came on board to test for radioactivity and lett. All working sphere safe for personal.
1330-0300 1227-0305	forget wessel todat his moored to starboard det water.	0935 1040 1016 1035	Translighter received water. Outtop moored to port for wares. Two referse inspectors came on board to test for radioactivity and lett. All working spaces cafe for personnel. Mar92 Moared to Starboard to discharge
130-8300 1227-8305 10 Acjuni	forget vessel todal with monowil to starboard det water. 1965-354 monored to pess for water.	0935-1040 1616-1535 1450-1503	Transitypes received water. Outtop moored to port for wares. Two redarfs important came on board to test for radioactivity and lett. All working sphere safe for personal.
1330-0300 1227-0305	Turget vessel 100000 MIN monored to starboard for water. 1965-354 monored to pett for water. 1955 Coursel (465-%) medication stargated	9935 1040 1816 1935 1850 1995 1850 1995	Translighter received water. Outtop moored to port for wares. Two referse inspectors came on board to test for radioactivity and lett. All working spaces cafe for personnel. Mar92 Moared to Starboard to discharge
1390-1300 1227-1305 10 Action 0743 2900	Turget vessel 10200 MIN moored to starboard for water. 1965-354 moored to poss for water. USS Council (465-5) modic-5 to staronard for moder.	0935 1040 1016 1935 1450 1935 2190 2190	Traditables received water. Ruston moored to post for wares. Two russafe interfaces came wares. Two russafe interfaces came wares. All working spaces cafe for performet. Yer92 Moored to Starboard to discharge water
L190-8300 1227-8305 10 Action 0743 1960 0908 6951	Turget wessel LUDIL NIN model in starboard for water. MRS 354 model to poss for water. USS Courd 1 (255-%) model to stargated for water. Attronues.	9935 1040 1816 1935 1850 1995 1850 1995	Transingly received water. Russing moored to part for wares. Two russings indered to part for wares. Two russings indered to perform to the All working spaces cafe for performul. Mr-92 Moored to Starboard to discharge wares. Mr-92 underedy from ourgoide having
L190-0300 L297-0305 10 Actor 0741 1960 0900 1951 0920 2953	Turget wessel to for when some or starbaard for water. MMS 354 monored to poss for water. USS Council (ASS-X) modicat to starbaard for water. Addressel modical to post for water. DSM 25 modical to post for water.	0905 1040 1016 1095 1050 1107 2190 19 Rugust 2700	Transingly an event water. Outtop moored to port for wares. Two referse interfaces came on tward to test for redirectivity and lett. All working spaces cafe for personal. Mer92 Moscel to Starburd to Starburg water Mer92 underway from nivingbide having discharged water.
L190-0300 1227-0305 10 Action 0741 1960 0900 1951 0920 0951 1055-1115	Turget wessel to200 MIN model on starboard for water. MMS 354 monoted to post for water. USS Council (ASS-X) model to starboard for moder. Arggman moter to post for soler. DCM 22 model to post for water PCM 22 model to post for water PCM 22 model to starboard.	0935 1040 1016 1935 1450 1935 2190 2190	Transingly received water. Russing moored to part for wares. Two russings indered to part for wares. Two russings indered to perform to a to the set of the two set of the performance of the performance of the set of t
L130-1300 1227-1305 10 Acjunt 0741 2900 0900 0955 0920 0955 1050-0115 1225 4230	Turget wessel 102000 MIN moored on starboard for water. MMS 354 monated to poss for water. USS Council (405-%) modify to starphard for moder. Adjunction for post for water. DGM 25 modify to post for water. DGM 25 modify to starphard. ATA 107 modify to post for water.	0905 1040 1016 1095 1450 (1.0) 2190 19 Rugusa 2700 8155	Transingly an event water. Outtop moored to port for wares. Two referse interfaces came on tward to test for redirectivity and lett. All working spaces cafe for personal. Mer92 Moscel to Starburd to Starburg water Mer92 underway from nivingbide having discharged water.
L130-1300 1227-1305 10 Actions 0741 C900 0900 5951 0920 3955 1050-0115 125 4210 (300 425	Turget vessel 0.2001 MIN moored to starboard for water. 1965 Council (ASS-X) medical to stargated for enser. Addgewent Moored to part for exter. 200125 moored to part for exter. 200125 moored to part for exter. 200125 moored to starboard. ATA 107 exceed to starboard. ATA 107 exceed to starboard.	0905 1040 1016 1095 1050 (100) 2190 19 Mugust 2700 1105 2700 1105 20 Mugust	Traininghes received water. Ourign moored as part for wares. Two outsafe important commons. Two outsafe important commons wares. Two outsafe important commons wares test for radioactivity and lett. All working spaces cafe for performed. Through Moston so starisons to discharge water Through underway form of orgbide having discharged water. Traderway for Kwataloke
L130-8300 1227-8305 10 Actions 0741 Cect 0900 5953 0975 3953 105C-2015 125 4215 1400 4215	Turget vessel 1.2002 NIN moored to starboard for water. 1965 354 moored to peri for water. 1955 Council (465-%) medication of starboard for water. Adapted to peri for water. 1969 25 moored to peri for water. 1969 25 moored to starboard. ATA 107 woored to peri for water. Deliver moored to peri for water. 1974 11 moored to peri for water. 1974 11 moored to peri for water.	0905 1040 1016 1095 1450 (1.0) 2190 19 Rugusa 2700 8155	Traininghes received water. During moored to part for wares. Two Guidenfe Inspectors come wares. Two Guidenfe Inspectors come wares. Two Guiden and Contraining and Lett. All working spaces code for performet. Two 2 Moster to Statistical to discharge water Two 2 Underway from Norrabide Having discharged water. Training for Kealstole Professed in Death George, anskorage Water.
L130-8300 1227-8305 10 Acjost 0741 0900 0900 6951 0970 3955 1050-0055 1925 4235 1925 4235 1947 1747 1740 1758	Turget wessel 10200 MTN moored on starboard der water. MNS 354 moored to pers for water. USS Council (ASS-A) modiet to staronard for water. Attended to pert for water. DSM 25 mound to starboard for water. NEW 01 mound to starboard for water. NEW 01 mound to starboard for water.	0905 1040 1016 1095 1050 (100) 2190 19 Mugust 2700 1105 2700 1105 20 Mugust	Traininghes received water. Ourign moored as part for wares. Two Guidanfe Indponences comb we board to test for radioactivity and lett. All working spaces cafe for personnel. Mers2 Meason so starioard to discharge work: Mers2 underway form oforgoide having discharged water. Inderway for Kwajaloke
L130-8300 1227-8305 10 Actions 0741 Cect 0900 5953 0975 3953 105C-2015 125 4215 1400 4215	Turget vessel 100000 NIN moored to starboard for water. 1965 Sound] (465-%) modet to starenard for water. Attracted to part for water. 200125 moded to part for water. 200125 moded to part for water. 200125 moded to part for water. 200126 moded to part for water.	0905-1040 1016-1095 (450-1007 2100 19 Nugust 2700 Nugust 1.40	Traininghes received water. Ourign moored to part for wares. Two Guidenfe Inspectors come we board to test for radioectivity and left. All working spaces code for performet. Mer92 Mosree so Starboard to Sischarge weign Mer92 underway from ourgoide having discharged water. Inderway for Kwajaloka Archesed in beath George, anskorage Whie.
L130-8300 1227-8305 10 Acjost 0741 0900 0900 6951 0970 3955 1050-0055 1925 4235 1925 4235 1947 1747 1740 1758	Turget wessel 10200 MTN moored on starboard der water. MNS 354 moored to pers for water. USS Council (ASS-A) modiet to staronard for water. Attended to pert for water. DSM 25 mound to starboard for water. NEW 01 mound to starboard for water. NEW 01 mound to starboard for water.	0905 1040 1016 1095 1050 (100) 2190 19 Mugust 2700 1105 2700 1105 20 Mugust	Traininghes received water. During moored to part for wares. Two Guidenfe Inspectors come wares. Two Guidenfe Inspectors come wares. Two Guiden and Contraining and Lett. All working spaces code for performet. Two 2 Moster to Statistical to discharge water Two 2 Underway from Norrabide Having discharged water. Training for Kealstole Professed in Death George, anskorage Water.
L130-4300 1227-4305 0741 2900 0900 0952 0905 0953 1050-5005 1125 4236 1405 4255 1647 1747 146 1748 1443 1759	Turget wessel 10200 MTN moored on starboard der water. MNS 354 moored to pers for water. USS Council (ASS-A) modiet to staronard for water. Attended to pert for water. DSM 25 mound to starboard for water. NEW 01 mound to starboard for water. NEW 01 mound to starboard for water.	0905-1040 1016-1095 (1150-1103) 2130 19 Rugust 2700 1135 20 Rugust 1-40 21 August	Traininghes received water. Outrop moored as para for wares. Two redon(a independent cumb on board to test for redirectivity and lett. All working spaces cafe for peridenel. Mar92 Moscel to testioned to discharge work: Mar92 underway from niorgbide having discharged water. Inderway for Kwajalaka Archarged in beach George, anchorage Able. Kwajalata.

### USS Wildcal (AW-1)

## USS W11son (00-408)

23 Angula 1170 11745	Webernhoe provided to portailise tar water
1519	nan Gelandey Source and Sour
1531-1640	Manshe wonred starboald forward for water.
24 August	
13.0 13 <b>6</b> 6	Y2+176 slowgside to rec⊬ive water.
1705	or 91 alongston to receive water
25 August	
Ced :	the 94 augustury Stude alongside.
26 August	
0321-5033	star:92 Boornal to charboastic Pareard for water:
1050-1099	Tuebigbee a test to starbound for water.
28 August	
1655	Underway from Kwa, district range for Pegg)

- //station.
- 9 September: 1596
  - Moored to berris F. 7. Peat: Harbor.

#### 1824-601 A02114 22U

Coem Store: 415 Rikin' Atoit Arrivel: 1 June 4986 Rikin' Atoit Beparkure 10 August 1546 Crow Location for Shat Able 1055 Baytinis (AFA 33) Communication for Shat Able 1055 Baytinis (AFA 33) Seot ABUE Location: 2,400 yards 41.6 km/ NM Shot BJait Location: 2,400 yards 41.6 km/ NM Shot BJait Location: 1,666 yards [1.5 km/ NM Shot BJait Location

- 1356 Unit and Function The descroyer Milson was a newber of th 2.2.2 (Descroyer Unit), Descroyer Christian 7 in was a target vector for ARCA and UNKER.
- 5551 A441 (1 July, 0900);
- dê Julw

09.)0 1130	Reached need to MayDould	Ser conditions
	Able throughout one ship.	

- I Gaty Anchosed in borch 179, Bikint, Ship sh (grad for ARGK encopi space, render! by last minute personnel Gist Secure all machinery and spaces for MPCR.
  - 6100 All personnel left ship to ANKE
- 2 July 1445 — Commonie et seboarding Willing Decised tree readation Able.
- 1.23 July Crew aboard \$1000.
- 5461 EMPER (25 Suly, 08)51

 24 July
 07JU Scarted evacuating personnell to Baytledd In preparation for BARER.
 0920 Captain and ally personnel Bers the ship decept nine Jast elimate personnel.
 25 July Anchesed in tests 128. Silitani

0220 Statted Fecuring only for test BAREP. 0300 Statted all equipment that not to be teoperation or the state of test BAREP.

- 0400 Cast-Micule personnel depursed Ship ket for BAKES.
- Support A. (geogramme) marced [com may) (whit for 1822) Benger (ACA-2071).
- 1 Karpust The initial boarding party boarded Whisep p(int to washdown to take teadings. Praired in post wount corpedo takes and retained from found): Sprayed ship with hor sourtion of law and boller compound. Attenting kit to and boller compound. Attenting kit to and boller compound. Attenting kit to and boller compound. Attenting to an appearance makings after washdown, how make processing kit to be body and boller compound. Attention in the high-pressure home. Here takes A.(A.) Took competative readings after washdown, how make body of the ship and received reporters between 0.5 and 0.35 R. [No Siler bodyes locared]
  - Table A 44 Representative Getzer eranious 18720 hours: on recoarding USS Writes (GD 408), 7 August 1946

Useathen	Before Mathicum	Ar jer Na védeven
	<u> </u>	<u> </u>
Increasive deck forward	3.5	1.0
Under Forward Uplates	40	эþ
Main dock arigonips	4 D	3 5
He'n Ceck fentell	1 0	30
Superstry;thre deak forward	4.5	4.0
Sridge wing port	\$ 5	5 G
Ar ideo wieg starbouid	2.5	23
Fulber mats, bildge wing, port (mer)	16.0	16.0
forecassie dess, slarboard, Frase 40		
(m16)	1.0	9.5
NO Jest (Simulars) from side (avg)	9.04	۵
Inside After Serebouse Lave)	30	*

·· · · · · · · · ·

No 16

dalo nevdorg

Source: Reference 4

- . . .\_ .. .
- 9.10 August Million boasded; unit of personnel unknown.
- #2 August Constanting officer and inspective party of 11 men boarded Wilson, sit officer gency (Reyel generator, Kound no Gamage or evidence of ficonting, Average coint atrix republic TO mission, below decay it boars: high relevance copulse a house, online decky & house, and each inspiler ceation i MS 5/25 house.
- 13 Regust Receivered Casabity (Classical Receivered) areas taken.
- 35 August Anchor detail aboard, attempted recovery of al-Sector anchor with regative reputs due to fouling with post arches. We read treps takes. Portrautile Interance 3 Means Pasty aboard about 2 Novre.
- A August Anthon details about completed recovery of underfoot theirs with assistance of

## <u>USS Wilson</u> (DD-408) 16 August

	the define which The construction of sound and down		
	<u>-25, 113 an</u> (AA 191; Asther placed on form castle, but not succeed to deck due to	19 Joly 25JU	Underway to conduct (is≷ing survey of
	absence of proper anteriol. Tolerator remained I builts on torerastle. Orpstaned	1505	Bixink Lagoon. Swored to swith 2058. Bistori.
	(or with Sight year of paint) forecastle		South in Sector 2030. Excent
	deck had low Getger seadings because of	. Doly	
	its excellent desinets; heavily pairted maindeck and lentabl with respatable	125	Underway for Recognith.
	drahrage had readings double or three	18 Jory	
	class that of forecastle (Reference 4).	1245	Archa:ed at Pongerik.
	Party aboard about 3 hours, 15 minutes.		
		19 July	
18 August	Mosking party Gowlded to holal author and propare it for inwide to Residen by	1405 L <i>3</i> 50	Didwaway to tendect fishing stavey. Rachowed in Respects Lagoon,
	A78-180. Transfersed 53 rea to JSS Nock	1350	Providend in Possign in Edgodin
	wall, (MRX-2301.	2: July	
		0400	Underway for Kongelap.
19 August	Underway in tow by ATA 185 (or Kwajaleto. TeannEerred 11 men no Rockwall.	. 430	Anchored in Swith 2. Pongelup.
	And Print 11 Mars to Pe <u>rku</u> tit.	Shal Bakes .	75 1717, (675)
ZL August	Addited of Exclusion		
		26 3069	1
28 Autquist	wijson decomplisioned.	1 ¢Q;	Anchored to begin 3. Rongelap.
		26 27 July	fundacted fishing conveys argund Ronge-
	Y#S 354		lap, enclosing or mooting each day at
	_		the red of the survey in Rangelap Root.
LARN SAVE 2	e Jarlagia (2) Myrch 1946	20 1	
	Beparture: 14 September 1940	29 July 0615	Underway to conduct disking survey of
3801 4921	allon of net /its and ! (Honselap)	****	Acageley Atol!.
SHOT BIKIN LC	raz'on. 65 nmt (170 km) (  RongeRap;	1605	Angle (*) [r Ronge ap stoll
	on Loras'or: Guana-Markanas Tearante - 20 2ecember 1946	<b></b>	
	teorence 20 Jectroper 1940 teoritik lebruary 1941	30 J.:19 :620	Underway to Bikini.
Fash Usts and		9: July	
	exempter YNG-354 was a member of TH (18.5) Could, As perf of the survey write, ste	0710	Proceeding to conduct fishing survey off White Atoll.
	included surveying the probable effects	1412	Nooced in besth 2056, Bikini
of the	muclea: tests on fish and other wildlife		
	besting an organographic survey to deter	1 Averaged	
	e chevacter of the accen currents in 201 . Right Replic	0535 0541	Underway with YME-010. Arcsored in Bikini Laguce.
a.uc; a u		5925	Dederway to YMS 413, whichersel in pyrate
Shot 3515 (1	July, 6900)		C68, MINIPL
		(230-1275	Roored (a MES 41).
3 000y 0721	inductor of change and same as Deputies	010) 2001	Noospul on ASD 29. Entered ARD 29 to be drydosked.
0830	Endorway to change anchorage at Rompsisp. Anchored in worth gast of Rompbiage.	1.20	graves was apply and the same graphics ((%)).
	· · · · · · · · · · · · · · · · · · ·	3 August	
3 July		104]	Cost off from daydock.
2133	Underway to Rikins.	1055	Anchored off Snew Island
6 .: J; Y		t Assault	
1255	Houted in bench 215, 35kini.	06:1	Underway to conduct (1shing survey in
5 1 30			Bittini Layuon. Heread an 1939 John (ADC 51 An Diblini
5 JUTY 29:5	Nooret in perch 20%, Biking,	1425	Noared to US <u>3_</u> 2eb_ (APC b) in Rimini . Atol:.
B July		/ Regard	
05.15	Underway to conduct flahing survey in .	3613 2(1)	Underway to conduct fishing wurkey. Modewil to 1965 417, Miking.
1605	Dikini LAquon. Moured (n Serth 2008, Dikini,	1.12	However (A law All) widtob.
		2 August	
yrig Goly	Regard in Clansing Energy's an history	06[4	Underliney to conduct Eishing survey of [
	Lagoon, returning to Bikin' Lagoon each.	1340	Biking Atoli. Howard standard aids to VMP-417 which
	day.	1346	Moored statecard wide to YMS-617. which was moored to USE high (AR-6) in betth
17 July	Roored alongside <u>(715</u> , Ajaz (AF+6),		2058. Bikini Akail.
1	<b>—</b> •• <b>– –</b>		
14 July   145	Noared to 2001 158.	10 August C645	lindernam na conduct Fichica anaros et
1.040		2042	Underswany sa conduct fishting ⊯usvey of 8aticinis
			•• •-

YMS-354

## YMS-354 10 August

1,220	Moored geor Alar, berth 2056, Bradol.	17 July	11. <b>4</b>
LZ Nocost C620	Underway to conduct Maning survey of	۷۱۹۲) ۱۹ پارچ ۱۹	Code casey the Roenger LL .
; 700	Dikich Atoji. Anchor≉i 4r Bikini.	1243	Ancherned of f Rongerth Istand.
14 18 August	Conducted Elshand Supveys of Boards Abolit petunolog such Gay to was; to	49 22 Jely	Sagaged in scutthe fishing, resonating each evening to Paugerik Esland.
	Biktol Legoon.	)) July 0745	Underway for coutine fishing.
22 A:M3963 1720	Entered drytlack of ARD 29.	1320	Second trom tisning, on cours to Pooge Jap. Action of the sector tobad
22 Jug 1st		1854	Antiwored off kengeliup Listand.
0362 1427	Ship Great of dimension Archoemd in Derry 2014, BLEMALL	24 3-219 0669 1215	Vaderesy for routine fishing. Anchored off Romanian Johand.
2) August 2 S	Engaged to write stangating operations and	Shot BAKIR (.	25 July, 0835;
	nekre ditas; surveys oli the pourhern acca a) galanni Aralà, Returned each day to ante	25 July	Anchored off Rongetay IntacA.
€ II Cepterbe	D(\$10)	lie 29 July	Engaged to resting (ishing, rotoching) each regains to Recorder Lagron,
• · · · • • • • • •	Conducted wire drag surveys, returning		and any and to any proposed
	to arctar each evening in southwest bi- kini Lagoou.	00 Zuly 0523	Undersony for rootties fishing.
14 September		1409	Beered in Pargelap Departed for Biking.
1151	Endethely End Yes)alein.	31 Juby	
15 September 2518	Anthorow at Kwajaluja.	1729	Moored in 6-1th 1995 Birthi
21 Ortuber J <sup>1</sup> 93	Laderway to Oues.	L N NOSLON	fingaged in routine listing, relation each evening to Eneu Laland.
0.02		6 (° August	Engaged in contine (isting, reference; auch evening to Bikini Lagoon,
	TMS-358	25 DL Konalat	Excanged by white dialoging operations, pre-
	)  Ar:1+8+: 27 March 1346 Departure  4 September 1546	•	terning each eventry to poster in the respectered of Birthi Lagorn.
Shot ABLE car	cachos. Honge lap, 65 nel 1170 kmj F	3 2 September	
Decontainada	scéllen: Poigélép, ét uni c120 bmi é 'on Locéllion: GuzniMari'anus Llearance, 20 Gezember 1585		Engaged in wire diagonal operations, re rothing mach evening to UKKini Lagaca.
Float Clearar	nce IG Senrywry 1541	<ul> <li>11 Septemb</li> </ul>	e: Emgaged in wire draaging operations, se
fact Upit and The size	difention comecent Mesi398 was a cometer of TULL&S		turning on h evening to Sittal Cagoon.
Scrwey Section	Drift). As part of the servey unit, its included deriveying the probable effects	34 September 1201	Underway from Bactal to Kealaista.
and con	nuclear acesss on fish and other wildlafe ducting an anear-speashic survey to deter	() Septembrie	
	e Dhatakiet ol ito ok∩an cosse=to Dh and Stéini Atol:	2001 21 Caraber	Rooted in betty K 10, K-ajabely-
SHOT ABLE (	Jult, 0900)	ALCOLONARI	Departed kwagalein for Gwaar.
t Caly Daeli	Anchored as Rompelap Aroll.		268 2MV
) July	Children an animal provide	(rew Size	17 Jerlyyl, 21 March 1946
a520	Underway log souring (isning.	BIRDOL ATOLS	Ceparture 14 Seutencer 1946
[335	Anthoned off Hongelap.	SPOC BACER (	catler At Pongelap, 65 nm1 (120 km) E scazier At Rungelap, 65 nm1 (120 km) E
4 July 0405 1245	Undermay for Bikshi. Anchored in Gwath 290, Bikinà.	Oper all kanal	ten totkilopi – GuzerMarkanss Clevrunde, IV Cesencer (996) nur – 10 Lebrunny (94)
5-16 July	angades (n souline tiuktry, recurning verb evening to Sikini.		

## YMS-413

1458	The mice (Survey) elssion and could micer the	Langshon Sweeger YMS 413 was a member of it 1.8.5 Unit: UN parts of the survey unit, its included surveying niv probable effects include: registion flab and other wildlife united in overhographic survey to deter- includesteal of the scene curtering its and ikins apoil	01 - Saliy 	Fold out of formation for (Subley opera- tions. Meased at Athéni. Emgaged in course fishing operations. at conclusion offermed to Basini.
55-78	A911-14	Ju¦y, 0900:	a (o Augus)	Engloyed the resultion (Ishang operation); at conclusion reterned to Bakhal
I :}↓I	ly Livao	Negration Recyclap Arvil	(2-13 August	Кирирој Vs. rostine fishing sperasions, at consiluation beturned to dikari.
) ),	64.40	telening for fishing operations.	15-17 August	FregAquest in coultre linking operations: at conclusion related to RECENT
_	17.3 786	Nochored al Paragetap Underway for Ristint.	28-29 August	Enonged in streaming wise drapping gears as conclusion returned to Pikiai
<b>न</b> उंधा	17 1877 1885	Guaranty and Thistology upart of Loops Records from Pilots	31 Jogust 6 :	enstender: Engeged (a stresseling ware dragg≯ag gista at concluster twappingt to βakint (agoo).
19.	iller y	theywent to thating operations of MIRAAL, recursion to the taggen at the conclusion of tracing estimates each day.	9 () Septembe	
11.1	1 uly	Engaged in (Autory sponstions, uncharing at Bigint at the constantion of each day's activities.	(4 September 1205	Midedway (now 2011), to toleje o (n
16 1	944 9527 8645	Under⊨sy (or coalline (SsiChe Apèra)(on) Mouted in Biblo).	15, September 1547	Avored in Scoth K (b. Kwajarejo.
		Regive if Biktol.	25 Courses	Joderway from Registers to Open
13 JU	1716 -	Proceeding to Progentic Acol!		
				T#5_863
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## APPENDEX A

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- <u>Ships' Logs</u> (Cited by ship's name, e.g., Reference 1, ATA-192).
- <u>Major Damage Report</u> (A report specified by OpPlan 1-46 for each target ship -- often referred to as "Report No. 5").
- Commanding Officer's Report

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- <u>Decontamination Reports</u>

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- 5. <u>Report on Atomic Bomb Tests ABLE and BAKER.</u> <u>Operational Report. Volume 1</u> January 1947 NTIS AD 473 986 XRD-206
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- 9. <u>Geiger Readings, USS Crittenden (APA 77)</u> Commanding Officer to Commander Task Group 1.2 23 August 1946
- <u>Boarding Reports</u> (For the cited target ship)
- 11. <u>Dispatch from Commander Task Group 1.2 aboard USS Rockingham (APA-229) to Director of Ship Material</u> 3 August 1946

## APPENOIX B

## RADIOLOGICAL SAFETY DOCUMENTS

## <u>Paq</u>e

•	Extracts from <u>Commander Joint Task Force i Operation Plan</u> 1 <u>46, Annex E Safety</u>	
	Appendix I: General Considerations of Radiological Safety, Test ABLE	451
	Appendix ]]: Radiological Safety Plan, Test ABLE	455
	Appendix IV: Safety Precautions	466
	Appendix IX: General Considerations of Radiological Safety, Tesi BAKER	413
•	Extracts from "Safety Precautions Incident to Boarding Farget Vessels Laid-Up at Kwajalein and Bikini." Letter from CTG 1.2. 30 Aug 1946	485
٠	Extracts from <u>Commander Task G</u> roup <u>30.12 Operation Plan</u> <u>ComStkResurvGrp No. 1-47</u>	
	Annex J: Radiological Safety and Health Plan	489
	Appendix I: Radiological Safety and Health Plan	490
	Appendix II: Radiological Safety Plan	496
•	"Radiological Reconnalssance of Bikint Island and Prayer Island," memorandum from Bikini Resurvey Radiological Safety Officer, 16 July 1947	500
•	<u>Report of Findings</u> , Medical-Legal Board, Bikini Scientific Resurvey	501

## COMMANDER JOINT TASK FORCE ONE

### OPERATION PLAN NO. 1-46\*

### ANNEX E - SAFEBY

## APPENDIX E

### GENERAL CONSIDERATIONS OF RADIOLOGICAL SAFETY

## TEST ABLE

#### 1. THE PROBLEM -- GENERAL INTELLIGENCE

- (a) When an atomic bomb explosion occurs, physical forces of extreme intensity are released at the center of the disturbance. They are propagated outward in all directions.
- (b) Casualties may be produced <u>directly</u> by blast, heat, light, ultra violet rediation, genma rays, neutrons and radioactive fission products which give off beta and gamma radiation. These are described as primary effects.
- (c) Casualties may be produced <u>indirectly</u> as a result of secondary hazards created by the above primary influences.
- (d) The flash from the explosion will cause heat burns similar to those produced by any explosion. Even thin clothing provides some protection against this form of flash burn. Wood is charred on the surface within certain areas. Fires may be started.
- (e) The light is so intense that the cetina of the eye may be seriously damaged by this influence alone. The skin may be "sunburned" by the ultraviolet radiation. Reflections from the water may intensify the heat and ultraviolet light radiation effects.
- (f) The blast is similar to that of most explosions but somewhat more prolonged in duration and of much greater intensity and extent.
- (g) The most harmful radiation appears in two forms. The primary radiation which occurs at the time of the flash is indeed a flash of bard gamma rays and neutrons. This flash exposure is very short, casualties are likely to result from this primary radiation if the exposure occurs within 4.000 yards of the center of the disturbance.
- (h) These neutrons create a secondary hazard by inducing radioactivity in certain elements within the range of approximately 2,000 yards. As a result, objects in the area immediately under the bomb will become radioactively hazardous to personnel. Similarly, particulate matter in the air within range of these rays may become radioactive, and present an airborne hazard; similarly, the water may present a waterborne hazard.
- (i) Besides the above sources of radioactivity there is still a third form. As the bomb is fired, so-called "fission products" are discharged into

<sup>&</sup>quot;With changes entered through 15 July 1946. Change #7.

the air. mostly in particulate form, and they constitute a cloud of highly radioactive material which makes up the "downwind" hazard. Most of this material is carried to 20,000 to 60,000 feet, becomes greatly diluted and dispersed by the wind and air movements and is borne "downwind." Gradually the particulate matter falls out. This "fall-out" may set up localized areas of hazard. It appears unlikely that there would be any significant hazard from this airborne dissemination at a distance of more than 200 nautical miles from the target.

- (j) A rain of radioactive droplets may occur as a result of these tiny tadioactive particles serving as a nucleus for the formation of tain droplets. This would probably follow "downwind" behavior. If the humidity of the air is high at the time of firing, the shock wave may compress the air to such an extent that rain may be produced and if so, this rain may contain radioactive material.
- (k) Fission products will be deposited in the water directly and present a waterborne hazard.
- (1) The above paragraphs describe the general features of the radioactivity hazard and it is with these facts in mind that the Radiological Safety Plan TEST ABLE is prepared (Appendix II to this Annex).

### PROTECTION

- (a) Against the primary effects, underground shelters offer considerable protection providing they are of such a nature as to withstand the light, heat, and blast, and provided they have sufficient thickness of earth or concrete intervening to filter out the gamma rays and the neutrons. This is purely passive defense. Equivalent thickness in still is required on ships for protection against the primary radiation hazard which accompanies the flash.
- (b) Against the secondary radioactivity hazards <u>detection</u> and <u>avoidence</u> provide the best protection. This is the basis of the Safety Plan as far as radiological hazards are concerned.
- (c) Against the light injuries to the eyes, special gogyles are required for personnel within 25 nautical miles of the flash if looking at it.

### DETECTION

Suitable instruments indicate directly both the presence of and intensity of the radioactivity at a given place. This applies to all, surface of land and water, subsurface water, target ships, drones, alloraft, and any situation where radioactive contamination might be present.

### AVOIDANCE

Area reconnaissance, the maintenance of a "contamination situation map." and the posting of areas of hazard constitute the active measures for avoidance.

### 5. ANTICIPATED HAZARDODS AREAS

(a) Immediately under the boxb burst there will be a large area of dangerous radioactivity. This will probably be more extensive in the water. after the surface burst than after the air burst and more extensive in the air after the air burst.

- (b) Downwind, an airborne radioactive hazard will exist. The characteristics of this will depend on meteorological influences (altitude, wind speed and direction, variations in wind speed and direction at various altitudes up to 60,000 feet, humidity of air).
- (c) Contaminated water from the lagoon may move down current, in accordance with prevailing water mass movement. The order of magnitude of the radioactivity is not known. It will certainly be much greater in the surface burst than in the air burst.
- (d) The "fall out" from downwind cloud may set up contaminated water masses downwind and these water masses will follow prevailing currents. Dispersion may be slow.
- (e) There is some indication that dilution may be facilitated in the water by dispersion and vertical mixing of the radioactive materials. If so, this will materially influence downcurrent surface water contamination and enhance safety.
- (f) All individuals or objects entering contaminated areas may transfer hazardous radioactivity to clear areas. Examples -- drones sampling column or clouds, craft entering contaminated areas of lagoon. etc.
- (g) Relation of compartmentation, ventilation, etc. on target ships to persistence or intensity of radioactivity is unknown and must be explored during this operation. It must be assumed that there is a significant celationship favoring the build-up and persistence below decks.
- 6. OPERATIONAL INTELLIGENCE
  - (a) When fission occurs the immediate reaction is intense radiation of ultra-violet light and heat waves, gamma rays, and neutrons. This is accompanied by the formation of a large ball of fire. A shock wave is initiated which is more sustained that that of an ordinary explosion. The ball of fire produces a mushroom-shaped mass of hot gases, the top of which rises at the rate of 10.000 feet per minute at least until it reaches about 30.000 feet. In the cone-shaped trail is left a "column" of boiling clouds, 3 to 10 nautical miles in diameter, characterized by extremely high temperatures, a moment of incandenscence, noxious gases, violent turbulence and a strong updraught. Surrounding this visible column is an invisible cone-shaped zone of highly dangerous contamination. The column is then carried downwind, the direction and velocity being determined by the direction and velocity of the wind at the various levels of air from 0 to 60,000 feet altitude where the top, or "crest" probably layers out.
  - (b) [not reproduced]
  - (c) Even at 20 nautical miles the light is of such intensity as to be painiul to the unprotected eye, producing an immediate temporary blinding, lasting for a half hour or more. The heat of the flash is felt on the bate skin. Approximately 50 seconds after detonation, at 10 nautical miles, the push of the shock wave or waves is felt distinctly and the roar of the explosion is heard. It, like the shock wave, is more sustained than the sharp crack of the normal TNT explosion.

- (d) Areas of radioactive bazard thus occur (1) immediately under the boxb burst, (2) in the air and in the downwind clouds, and (3) on the surface of land or water where radioactive materials Eall out of the downwind clouds.
- (e) By means of instruments such as Geiger-Muller Counters it is possible to detect the areas of contamination and to measure the intensity of the radioactivity.
- (f) The unit of radioactivity selected for practical purposes is the roentgen. For purposes of safety in this operation. It is considered that an individual should not have a rotal exposure of over 50 or 60 roentgens in two weeks. If an individual roceives 10 roentgens in one day, or 60 roentgens in two weeks he will be withdrawn from active participation in the operation. The maximum allowable dose or tolerance for daily exposures over a long period is 0.1 roentgen.
- (g) The intensity of the radioactive hazard tends to decrease with time due to (1) decay of radioactive materials and (2) dispersion, dilution, and transference from the immediate site.
- (h) The intensity of the radiation from the fission products in the "column" decreases inversely with time in hours after the first hour so that an area which had 15 roentgens per hour at one hour after det onation would have an intensity of 7.5 roentgens at two hours after detonation and 5.0 roentgens at three hours, assuming, however, that no additional radioactivity had been added in the meantime (fall out of cloud, wind drift of particles, etc.). This latter point is especially important to those in the downwind positions (planes and DDs).
- (i) Besides the Geiger counters, photographic film is used as an indicator of exposure to radioactivity. Certain personnel will wear film badges to indicate absence or presence of radioactivity exposure.

7. Test B will present problems somewhat different from Test A but the genral principles will temain the same. The radioactivity in the water will undoubledly be greater and contaminated areas remain hazardous for a longer period.

## APPENDIX []

RADIOLOGICAL SAFETY PLAN, TEST ABLE

## Organization:

Radiological Safety Section. Chief of Section

- (a) Radiological Safety Control Unit
- (b) Radiological Safety Advisory Board
- (c) Radiological Safety Reconnaissance Units
  - ()) 2 PBM Units
  - (2) 2 Helicopter Units
  - (3) 6 "Downwind" Destroyer Units.
  - (4) 3 "Upwind" Destroyer Units
  - (5) 6 Lagoon Patrols
    - 6 Gunboal (PGM) Units
    - 20 LCPL Units
  - (6) 6 "Cloud tracking aircraft" Units.
  - (7) 2 Brone Boat Units
- (d) Radiological Safety Monitor Advisors
- (e) Radiological Safety lechnical Service Units.

1. <u>GENERAL INFORMATION</u>. Appendix I to this Annex contains general information on the radiological situation expected to develop. It is the responsibility of the Manhattan District to prepare and execute this plan and to pass on the qualifications of and train the personnel necessary thereto.

 MISSION. To protect personnel from the hazards peculiar to the use of the atomic bomb during Operation CROSSROADS and to enable personnel to return safely to the target area at the earliest possible moment.

3. TASKS

(a) The Radiological Safety Control Unit will consist of the Section Chief and his control staff. This unit will be based in Radiological Safety Control, aboard MT. MCKINLEY. It will receive, plot, and analyze radiological information sent in by the reconnaissance and advisory units. It will maintain the radioactivity situation map. It will control the reconnaissance units in order to obtain the necessary information. It will consult with the advisory units. It has the ultimate, complete, and vitally important responsibility of advising CJTF-1 as to the location, severity, and probable significance of hazardous areas, and advising him on action recommended for the safety of personnel. It will furnish to CJTF-1, prior to How hour, a prediction as to the probable downwind direction of the cloud mass and the downwind current movement of the contaminated water masses.

(b) The Radiological Safety Advisory Board will consist of the senior scientists and officers of the Safety Section. This board will advise the Chief of the Radiological Safety Section on technical matters including correlation of aerologic and oceanographic data and anticipating likely air currents and water currents that might govern the distribution of the bomb cloud and water extensions. This board will assist the section chief in preparing the radiological predictions prior to ARLS and BAKER days. It will assist the section chief in preparing his reports of the operation, particularly the technical section thereto.

(c) The radiological safety reconnaissance units are composed of one or more "monitors" and their assistants. The term "monitor" will be applied to personnel of this section qualified for service in the radiological measurement activities of the section. They will be placed on various reconnaissance destroyers, gunboars, landing craft, and planes. They will operate directly under the Chief of the Section and must at all times be in direct communication with him through his control unit. They are equipped with portable Geiger counters and other radiological equipment that indicate the presence of and measure the intensity of the radioactivity. "Personnel badges" (film) will be carried on the person of all monitors and their assistants. These will serve to detect total exposure. These badges will be worn for one day only. will be collected by the senior monitor of each unit, and will be labeiled as to date, area, and name. They will be turned over, as soon as practicable, to the Photometric Unit. Radiological Safety Section, on board HAVEN. In their reports to Control, monitors will report the instrument used and the radiological strength in terms of roentgens, Monitors will generally operate within the safe fringe outside the limit of the danger areas. The success of all these reconnaissance units depends primarily on excellent communications between monitors. and control and on accurate and easily understood descriptions of the position the monitor at the time of each report and the accurate location. of the areas he is reporting on. Each monitor of individual monitoring party will be in direct two-way communication with Radiological Safety Control at all times.

For purposes of describing positions and courses of ships and planes carrying reconnaissance units a radiological axis will be used. The origin of this axis will be the target. Its direction, to be announced by CJTF-1 (by dispatch to all radiological safety reconnaissance units) about How ainus one hour, will be based on the direction of the wind at all altitudes. At the time it is announced it may be in the same direction as the sector axis but, whereas the sector axis may be changed from time to time, the radiological axis will not be changed unless there is a wind shift of more than  $20^{\circ}$ . Thus the axis itself is described as  $000^{\circ}$  (RRA) or  $360^{\circ}$  (RRA). Weather predictions indicate that this axis will be approximately  $090^{\circ}$ (True).

3.(c)(i) <u>PEM Units</u>. A PBM unit consists of one senior monitor and one assistant embacked in a PBM. Each unit is equipped with a minimum of:

- I Geiger counter
- | Ionization meter (Ion meter)
- 2 Personnel badges
- 1 Electrometer pencil
- I Casualty badge.

There will be two such units, one of which acts as a reserve during the first phase of the operation. They will be based at Sbeye. These units will make the first radiological reconnaissance of the lagoon area. The two PBMs will take station at Orbit Point "Victor" (bearing  $315^{\circ}(T)$  distant 30 nautical miles from the target), at 2,000 feet altitude. by How hour minus thirty (30) minutes. On order of CJTP-1, probably about Mike hour plus twenty (20) minutes, the PBMs will proceed in company to a position 5 nautical miles upwind of the target or to such other positions as may be directed by CJTF 1. They will break formation and PBM Charlie will approach the lagoon along the sector axis. When 3 hautical miles from the target the plane will start traversing the suspect area, at 2,000 feet altitude, in a series of parallel flights normal to the wind direction and closing in on the ranger. These flights shall be not less than 6 nautical miles long, 3 nautical miles on either side of the target, and 1 mautical while apart except that flight lines 1/2 nautical mile apart will be flown between points I mile either side of the target. If a dangerous amount of radioactivity is not encountered, the PBM will continue until 2 nautical miles past the target. As soon as PBM Charlie finishes this pattern it will drop down to 1.000 feet and repeat it. It will also notify PBM Dog, which will come in at 2,000 feet and will cover the same area (a rectangle 6 nautical miles by 5 nautical miles) by making similar flights parallel to the wind direction, with the first such flight on the side nearest the entrance to the lagoon of Tab 1 to this Appendix). Upon completion of this it will withdraw to the upwind position until PBM Charlle has completed the crosswind explorations at 1,000 feet when PBM Dog will repeat its pattern at this altitude. PBM Oog will repeat its pattern at this altitude. PBM Charite will repeat its pattern at 500 feet, again followed by PBM Nog. As each plane finishes at 500 feet it will withdraw to the upwind station, report, and await further orders. If indications of dangerous radioactivity are encountered the path is shortened and a series of short passes are made of Tab 1) to this Appendix). The object is to just approach the contaminated area and then turn abruptly, circle upwind, and then move down wind for the next pass, until the limits are roughly located. Upon arriving at a point 2 nautical miles downwind of the target each plane will discontinue the exploration and return to the upwind position and await orders. If the examination at any level cannot be completed, explorations at lower levels will not be attempted unless ordered, and planes will withdraw to the upwind position. Further movements of these units will be ordered by CJTF-1 in accordance with the radiological situation at the time.

### 3.(c)(2) [OELETED]

3.(c)(3) <u>"Downwind" Destroyer Units</u>. A "Downwind" Destroyer Unit consists of one Senior monitor and one or more assistants. Attached to each unit are 2 oceanographers of the Oceanographic Unit. There are six of these units embarked in Destroyers 722, 723, 724, and 725 of Destroyer Division 71 and [Destroyers] 781 and 694 of Destroyer Division 72. The Destroyers and the embarked units are equipped as follows:

- General for each:
  - 2 Geiger counters #263
  - 1 Ionization meter #247
  - 50 Casualty badges
  - 350 Personnel badges
    - I Counting rate meter with recorder and distant indicator. Water tap lines attached to an intake for radiological measurement purposes.
    - 1 Deep-water counter with recorder and deep-water indicators plus 1.000 feet length electric cable and reel. davit. and one spare probe.

Special for DD 722, 723, 724, and 725;

5 Nansen bottles

6,250 feet 5/32" wire

- 1 Oceanographic sampling winch, meter wheel, and davit
- 1,000 4-oz. bottles
- 1.000 16-o2. bottles
  - 2 Plankton nets
  - 375 Kelvin sounding tubes
    - 1 Bathythermograph winch, instruments, and boom.

Special for 00 722 and 724:

- I Filter Queen with proportional alpha counter
- 1 Scanning counter
- Special for DD 770 and 781:
  - 3 Wansen bottles
    - 1.000 feet 1/8" wire
  - 1 B.T. winch, meter wheel and davit for oceanographic sampling
  - 500 4-oz. bottles
  - 500 16-oz. bottles
    - 2 Plankton nets
  - 185 Kelvin sounding tubes.

The function of these units is to define and measure the water and surface air contamination outside of the lagoon. They will establish the early limits of the radiologically dangerous areas in air and water, will trace the movement of the cloud masses, will obtain surface and deep-water samples for testing groups and oceanographers, and will obtain biological samples.

At How hour. Destroyer 722 will be at Point "Willys." 725 at the "Initial Point." 781 at Orbit Point "Baker." and 724 and 723 in area "Rudson." At the "bombs away" signal. 725 and 781 will proceed on course  $90^{\circ}$  (RRA) at maximum speed For 30 minutes and will then return at half that speed to a bearing of 165° (RRA) from the target. with the 725 40 nautical miles distant and the 781 60 nautical miles distant.

At Mike hour, 722 proceeds to a point just off the entrance to the lagoon, makes a thorough radiological reconnaissance of the entrance, and then runs along the southern edge of the atol! and proceeds to a point bearing 165<sup>0</sup> (RRA) from the target, distant 22 nautical miles. It turns onto course 210° (RRA) and crosses the cloud path. When the first appreciable indication of radioactivity is noted in the surface water the Destroyer will stop and the unit will take deep-water samples and deep water radiological measurements at 50-foot intervals down to the maximum depths at which radioactivity is detected. It will then continue crosswind. When the peak of greatest activity is reached, probably when on bearing  $180^\circ$ (RRA) from the target, similar samples and measurements will be taken. The same procedure is used when the surface water indications are just dying out. When this Destroyer reaches the line bearing 195° (RRA) from the target, it will make a left turn onto this bearing line and will follow it to a point BO nautical miles distant from the target, where it will make a similar crossing of the path back to bearing line 1650 (RRA). At Mike hour, Destroyers 724 and 723 leave area "Hudson" and proceed in that order around the northern edge of the atoli. At Mike hour, Destroyer 694 will proceed at maximum speed to join Destroyers 723 and 724 and thereafter will continue with them on downwind patrol. They found the western end of the atoll until they intercept the line bearing  $195^{\circ}$  (RRA) from the target. They follow this bearing away from the target until the individual ships reach the points at which they will cross over to the other boundary. of the cloud path (165<sup>o</sup> [RRA] from the target). Destroyers of both patrois will make crossing from one boundary line to the other in a leap frog Eashion, taking soundings as described above for the 722.

No crossing may be made without permission of CJTF-1. No destroyer will make a crossing uptil all crossings nearer to the target have been started, unless otherwise ordered by CJTF-1. The two outside bearing lines, 1650 (RRA) and 1950 (RRA), may be changed by order of CJTF-1. Between Mike plus 1 and Mike plus 3 hours, the maximum speed for all "downwind" destroyers will be 10 knots. Between Mike hour and Mike plus 1 hour and at all times after Mike plus 3 hours, maximum speed will be 20 knots. Exception to this is the 30-minute run of 725 and 781 immediately after release of the bomb. These operations will continue in the above manner until the distant limits of detectable radioactivity are reached. Thereafter, when ordered by CJTF-1 (approximately ABLE plus two days), they will return to the region of the atol1; and, as ordered by CJTF-1, will take such stations as will enable them to survey the spread of the contaminated water through the reef channels and will continue there until such waters are free of

contamination. Any Destroyer finding itself in an area with a radioactivity of more than 0.1 toentgen per twenty-four hours will withdraw immediately to a safer point.

3.(c)(4) [not reproduced]

3.(c)(5) <u>Lagoon Patrols</u>. A lagoon reconnaissance patrol consists of one gunboat and its embarked unit and three or four LCPLs and their embarked units. as tabulated below. The senior monitor in the gunboat shall direct. supervise, and coordinate the work of the radiological units of the gunboat and its attached LCPLs. The Commanding Officer of the gunboat is the patrol commander. We shall be guided by the technical advice of the senior monitor in directing the movements and other activities of the patrol. A Cunboat Unit consists of two or three senior monitors and assistants. One or two oceanographers will be attached to each unit. There are six such units, each of which is embarked in a gunboat (the term PGM will not be used in order to prevent confusion with PBM). Each unit has the following equipment:

- l Ion meter #7
- 1 Geiger counter #263
- l conization meter #247
- I Counting rate meter with recorder and distant rate meter
- 1 Deep-water counter with recorder and distant indicator plus 500 feet electric cable and hand-operated reel
- 3 Nansen bottles
  - 1.000 feet wire: 1 B.T. winch. 1 boom
- 250 4-oz, bottles
- 350 16 oz. bottles
- 125 Kelvin tubes.

An LCPL Unit consists of three monitors and at least one assistant. embarked in an LCPL. There will be 20 such units. Three or four of these units will be attached to each of the Six lagoon patrols. Five LCPLs will be equipped with surface rate meters and will be known as the "Able" Type. They will be numbered "Able" one through five. The other fifteen will be known as the "Baker" Type and numbered "Baker" six through twenty. Oceanographers will be attached. If available, to each of the "A" Type units. Marine life parties will be attached to Units B19 and B20. All units carry the following equipment per unit:

- 2 Geiger counters #263
- l Ionization meter #247

Personnel badges for 50 percent of personnel

100 Water sample bottles

Lagoon charts

3 Casualty badges.

Each LCPL will have, in addition to the usual crew, a boat officer. The boat officer is in command of the boat and has complete authority over all personnel in it. He will be guided by the advice of the senior monitor in directing the movements of his boat and on matters pertaining to its radiological mission and safety. A primary duty of the boat officer is the accurate plotting of the boat's positions.

· — — – –	<u> </u>	
Patrol Name	Gunboat	LCPLS
Brass	23	AL, 89, 812, 819
Cobalt	24	A6. 87. 38
Gold	25	A2, BLD. 811
Iron	29	A3. B13. B14
Nickel	31	A4. BI5. B16
Steel	32	A5, B17, B18, B20

The Patrols are constituted as follows:

The duties of the patrols are to determine the early boundaries of the contaminated area in the laguon and to trace the movement of '1', area and the changes in the intensities of the radioactivity in the contaminated waters. When the situation permits, some of these units may be diverted by the Chief of the Radiological Safety Section to other scientific activities. At the time of detonation, the gunboats are in area "Packard." and ARTEMIS, APPLING, and HENRICO are in area "Mercury." At Mike hour, the gunboats will move into area "Caterpillar" and the APAS and AKAS to area "Cadillac." As soon as favorable reports are received from OD 722, probably by Mike plus one hour. CJTF-1 will order these units to approach the lagoon. The gunboats will take position in Line abreast, 600-yard interval. across the Lagoon; in order from the right 23, 24, 25, 29, 31, and 32, They will stand by until joined by their LCPL units. As quickly as practicable the LCPLs will be launched not more than one mautical mile from the lagoon entrance and will join their respective gunboats. As soon as each patrol is assembled. It will proceed carefully to its assigned sector. These are as follows:

> Brass to Argentina Cobalt to Brazil Gold to Chile From to Denmatk Nickel to England Steel to France.

In each patrol, the gunboat will lead the way to the line of target ships within its sector, work down the line toward the center, and establish a forward position at the edge of the contaminated area and about midway.

between the boundaries of its sector. If no contaminated water is found in a particular sector the senior monitor of that patrol will report immediately to the Chief of the Radiological Safety Section and the patrol will be reassigned. The LCPLs will closely follow their gunboat to the assigned line of target ships and will work down that line in alternate serpentine courses about the targets. They will also investigate the ships not in line. They will then assist the gunboat in more closely determining the boundaries of the contaminated area. They shall report their positions and readings every 30 minutes or whenever significant radiological changes are encountered (a sudden or steady rise in readings of 0.01 R). Should communications in LCPLs fail, they will communicate their findings to their PGM for transmission to Radiological Safety Section of MT. MCKINLEY as expeditiously as possible. As the area changes in position and intensity. each patrol will continue to trace it. As soon as possible, CJTF-1 will order the two upwind patrols to move around the target and take over the two, hitherto unassigned, downwind sectors, "Greece" and "Holland." The upwind positions will be taken over by the "Upwind" Destroyer Units. LCPLs B19 and S20 will be released by the Chief of the Radiological Safety Sec. tion for other duties as practicable.

3.(c)(6) <u>Cloud-Tracking Aircraft Units</u>. These Units consist of one monitor and one assistant embarked in a B-29 or F 13. A photographer will be attached to each unit. There will be six such units, two of which will be in reserve, the other four divided into 2 pairs. Each unit is equipped with a minumum of:

- 1 Geiger counter #263
- 1 fonization meter #247
- 2 Personnel badges
- 1 Electrometer pencil.

These units will attempt to follow the course of the high-level cloud mass and report its positions as it is carried downwind. The Photographer will take pictures of the cloud, which will be sent to the Chief of the Radiological Safety Section as soon as possible. Prior to How hour these units are based on Kwajalein. At Mike hour plus 30 minutes the two pairs of units will take station on either side of the cloud approximately 30 nau tical miles from it, bearing  $90^\circ$  (RRA) and  $270^\circ$  (RRA) from it at 25,000 feet, or high enough to be above the normal cloud ceiling, if possible. These planes should fly back and forth on courses parallel to, and keeping pace with, the high cloud mass, they will keep at the optimum distance from the cloud for ease of observation. The planes of each pair will fly in opposite directions on a flat oval course in order to obtain the best fixes on the dimensions and positions of the cloud and the best possible photographs for later checking of this information. The pilots will report to the Force Fighter Director on the visibility of the highest cloud mass. its apparent height, size and position, and its movement. These reports will be made every fifteen minutes. All reports will be immediately transmitted by the Morce Fighter Director to Radiological Safety Control. On detection of the presence of radioactivity, the pilot will immediately report it and, with advice from the monitor, ascertain the extent of the hazard in order to outline the extent of the hazardous area.

The pilot will be guided by the monitor when the necessity of taking evasive action arises due to dangerous amounts of radioactivity. In such a situation, the ventilators will be closed until clear of the contaminated area to avoid as much contamination inside the plane as possible. The monitor will be guided by the limitations as to safe or permissible exposures in accordance with basic radiological safety measures set forth in Appendix I to this Annex. They will at all times take into consideration the possibility of contamination of the fuse and the possibility of contamination and exposure of the personnel while returning to the air base. The pilot will keep in mind the possibility that a dangerous amount of radioactive material may bar his path toward his air base. forcing him to seek an alternate course free from such danger. He must therefore terminate his survey while he still has sufficient fuel for several times his straight course to the base.

3.(c)(7) A drone boat unit consists of a remotely controlled LCVP with a radio broadcast genger counter installed. It is used primarily for sampling purposes, but the radiological information obtained should be very valuable to this section. At about Mike plus thirty minutes, the drones will proceed from the entrance of the Lagoon to the target and return in accordance with the Drone Boat Plan (Annex CC).

(d) <u>Radiological Safety Monitor Advisors</u>. The Chief of the Radiological Safety Section will assign trained monitors to certain commands and planes within the force and will properly equip them. These monitors will advise their commands and pliots on subjects concerning radiological safety. Although their duties are not primarily reconnaissance, it is essential that they be able to communicate rapidly with Control on matters of radiological safety for two purposes: (1) to report any evidences of radioactivity, and (2) to receive advice on actions to be taken for safety reasons.

One group of these monitor advisors must be planned for separately from the others. As they are almost as important from a reconnaissance as from an advisory standpoint. This is the group of monitors and their assistants who are assigned to the Director of Ship Material (see Re-boarding and Inspection Plan - Annex X). One or two of these monitors will be attached to each of the ten Boarding Inspecting Teams. Ten additional monitors are assigned to a special pool to be employed as the Director of Ship Material may required. Each of the monitors of pairs of monitors assigned to the ten teams will have the following equipment:

1 Geiger counter #263

- 1 Ionization meter #247
- l Zuto (6 only)

Report sheets

Personnel badges.

Each individual will have:

Coveralis, boots and gloves

Gas mask

Oxygen breathing apparatus First-aid equipment Emergency rations and canteen of water.

The duties of these monitors must be coordinated with those of the Damage Control Safety Section to insure that personnel boarding target ships do not subject themselves to unrecognized hazards. These monitors will report, as promptly as possible, their radiological findings to Radiological Safety Control via Director of Ship Material. In addition, these monitors will distribute beforehand, and collect afterwards, the casualty badges, per sonnel badges, and Penny's blast gauges assigned to certain target ships. They will also provide safety reconnaissance for the Naval Medical Research section and will place films for measurement of exposure of animals to radiation.

(e) <u>Radiological Safety Technical Service Unit</u>. This unit is composed of the instrument repair personnel, the photometrists, and the analysts of water, soil, fish, etc. The first group will maintain, repair, and callbrate all of the many and varied instruments of the section. They will supply monitoring equipment to all planes operating in the area after Mike hour that do not carry monitors. They will train the pilots in the use and meaning of such instruments. The duties of the photometrists are:

> Calibration of film exposure standards Preparation of casualty and personnel badges Processing of exposure films. Estimation of exposures as indicated by films. Recording of results.

The monitors will provide personnel badges (film) to personnel entering hazardous areas. These badges will be collected each day by the monitors, and the photometrists will assess and record the radiation exposure of each person so exposed. The analyst group will analyze samples of water, soil, fish, etc. from both chemical and radiological standpoints.

 $B_{n}(x)(1)$ . The section will provide such information as GJTF-1 and his staff may require for indoctrination and orientation of personnel in regard to radiological hazards and behaviors of the column and cloud masses.

3.(x)(2). The section will provide consultation service for the staff of CJTF-1 with regard to radiological safety problems in planning and in operation.

3.(x)(3). Special radiological reconnaissance, not essential to safety. may be conducted by monitors when safety requirements are not overiding.

3.(x)(4). Radiological reconnaissance will be extended to land surfaces of the lagoon as soon as is practicable. For approaching instrument towers on islands, special monitors will be assigned to accompany the landing parties. 3.(x)(5). Monitors will frequently check radioactivity of various parts of their own ship or craft. including underwater hull and all intakes, particularly condensers, boilers, and other places where there may be a concentration from contaminated water.

3.(x)(6). Monitors. and personnel accompanying them on radiological reconnaissance. Will carry their own food and water while on a mission.

3.(x)(7). Special situations may permit the assuming of a calculated risk in order to let certain key personnel enter a hazardous area to make highly desirable observations when the total amount of radiation to be received is less than 10 toestgen units. This may be permitted only on direct instructions from Radiological Safety Control. Details of the situation and clearance therefor will be carefully logged by the accompanying monitor and at Radiological Safety Control.

3.(x)(8). It is possible that the cloud of radioactive materials will be in the path of air travel between Kwajalein and Cuam or Kwajalein and Johnston for part of the time during the period from Mike plus 24 hours to Mike plus 48 hours. Other air routes may be similarly threatened. It will be possible on ABLE minus 1 day to predict fairly accurately the probable course of the cloud movement during the period Mike hour to Mike plus 24 hours. During this period. Mike hour to Mike plus 24 hours, the course of the cloud can be plotted fairly accurately, and from field reconnaissance data available at that time the hazard across these flight paths can be predicted for that and subsequent periods.

3.(x)(9). No flights within 150 nautical miles of Bikini will be permitted unless as a part of Operation CROSSROADS (see Air Plan - Annex F. and Security Plan -- Annex D). Recommendations concerning release of this restriction will be made to CJTF-1 by the Chief of the Radiological Safety Section after consultation with the Aerologist at Radiological Safety Control and after the correlation of pertinent data has been made.

3.(x)(10). The general disposition of ships on ABLE day is shown in Annex J to this plan.

3.(x)(11). The primary considerations that govern the entry into the lagoon relate mainly to the hazards anticipated (Annex 1). Of these, the radiological hazard is of particular importance because of the lack of information relative to just how intense, how widespread, and how persistent it may be.

3.(x)(12). The Radiological Safety Section will join the rest of JTF-1 in a full-scale rehearsal on Queen day.

3.(x)(13). For Test "B" the same general plan of radiological reconnaissance will be effected, modified in such detail as the situation may required. The main differences will be greater distances from the target at "How" hour and a slower approach to the target area in the reentry and target ship inspection phase and such changes as are required to meet new weather conditions. (See Radiological Safety Plan Test BAKER -- Appendix X to this Annex). 3.(x)(14). An official report of scientific and operational data will be submitted, through Technical Staff channels. to CUTF-1. The usual operation report will be submitted through channels. See Annex BB.

3.(x)(15). Historical data will be prepared as directed by Deputy Task Force Commander for Technical Direction (Annex RB).

3.(x)(16). For movements of NT. MCKINLEY and HAVEN see Annex A.

4. Logistics in accordance with Annex B and Appendix VII to this Annex.

5. Communications in accordance with Annex C and Appendix VI to this Annex. Chief of Section in HAVEN except when in MT. MCXINLEY between Queen minus one day and about ABLE plus five days and during similar period at time of Test "B."

# APPENDIX IV

#### SAFETY PRECAUTIONS

1. SAFETY OF PERSONNEL ABOARD SHIP AT TIME OF DETONATION

- (a) Protection at Time of Detonation
  - <u>Ceneral</u>. CJTF-1 will direct the operations of ships and aircraft in such a manner as will assure a maximum degree of sofety to all personnel involved.
  - (2) <u>Ships at time of detonation</u>
    - (aa) No ships will be permitted closer than ten (10) nautical miles to the point of detonation at the time of detonation.
    - (bb) Most of the ships of the Force will be 20 nautical miles or more from the point of detonation at the time of the detonation.
    - (cc) Ships and personnel essential to the safe and expeditious accomplishment of the technical mission will be approximately 18 nautical miles from the point of detonation at time of detonation. Three ships will be 10 nautical miles at time of detonation.
    - (dd) The position of the <u>SECTOR AXIS</u> (Annex I. Reentry Plan) will be established on the basis of wind direction at intended time of detonation.
    - (ee) The ships of the Force will be directed to operate in designated areas upwind of a line through Point Auto, normal to the <u>SECTOR AXIS</u>.

- (3) Individuals at time of detonation
  - (aa) Individuals on board ships of the Force will be protected <u>coilectively</u> by the operation of the ships from the hazards of blast, heat, and redioactivity. This protection is a primary consideration in establishing the distances ships will be from point of detonation at time of detonation.
  - (bb) Individuals on board ships of the Force will be required to take individual action in the protection of their own eyes at the time of the deconation. The required action is given. The responsibility for carrying out this action is that of the individual himself. This fact will be made known properly to all individuals concerned by those having proper responsibility therefor.
  - (cc) All Commanding Officers of ships shall observe the following safety regulations in regard to personnel who are not provided with goggles.
    - At Now hour minus 10 minutes. Commanding Officers of all ships within 30 pautical miles of Bikini Atoli will assemble topside all hands not otherwise required below decks, to observe phenomena of the bomb explosion.
    - 2. At How hour minus 5 minutes, commanders will have read clearly over the loud speaker system the safety regulations that have been specifically prepared by CJTF-1. The instructions read to ships' personnel will include what to do and how and where to face between the time the command is given to look away and the occurrence of the bomb flash. Commanding officers shall clearly indicate direction in which to look.
    - 3. At the signal "<u>RELEASE MINUS</u> <u>Two MINUTES</u>" Commanding Officers shall order all hands (a) to face in a direction properly indicated by him as being away from Bikini Atoli. (b) to look down at the deck. (c) to shut their eyes, and (d) to cover their closed eyes with the bent arm against the face. Personnel will remain in this position until after the flash, at which time they may "carry on." It is safe to view with the naked eye the incandescent column that follows the flash.
  - (dd) All Commanding Officers of the ships shall observe the following safety regulations in regard to personnel who are provided with approved goggles:
    - The Commanding Officers shall add "ADJUST <u>GOGGLES</u>" to bis command at the time of "<u>RELEASE MINUS TWO MINUTES.</u>"
    - Those with approved goggles may look directly at the flash or otherwise as they desire.
    - They must not remove goggles until after the flash. The flash may be taken as the signal to remove the eye protection and observe the phenomena that follow the explosion.

- (ee) Approved goggies (Navy Al) Purpose Goggies, 4.5 Neutral Density Filter Replacement) will be provided for all personnel on ships nearer than 20 nautical miles at time of intended detonation (H hour) and for observers (not ships' personnel) on Press and Observer ships.
- (ff) Emphasis. throughout. will be placed by responsible leaders on the fact that, while no serious damage can result from looking at the flash at a distance of 20 nautical miles or more, the flash is so blinding it will prevent the individual from seeing the beautiful display of colors in the incandescent column of cloud and the gigantic clouds that follow the explosion.
- (b) By direction of CUTF-1, these instructions pertaining to individual protection of the cyes are included in the operations plan and will further form the basis of suitable instructions to be issued separately to (a) commanding officers, and (b) press and observers.
- (c) There need be no concern on the part of individuals for their personal safety if they will (a) follow the commands of their respective commanding officers. (b) observe the intent of the instructions as to safety for the eyes, and in the case of participating observers, monitors, operational and technical personnel intimately participating in the operation. if they observe all requirements of this annex.

#### DANGER FROM RADIOACTIVE OBJECTS ON TARGET SHIPS.

On target ships and possibly on the islands of the lagoon, certain objects may become dangerous to handle due to the effects of radiation, or to contamination with radioactive material. Because of this subtle hazard no personnel of the Force will handle objects on target ships unnecessarily. Under no cir cumstances will souvenirs be taken from target ships. This is particularly important as far as scrap metal is concerned. Commanding Officers will disseminate the required information to personnel within their command, and will enforce this safety regulation. This regulation will apply not only to service personnel but to civilian technical observers and to official visiring observers, as well.

3. SAFETY OF PLANES AND AIRBORNE PERSONNEL

## (a) General Safety Precautions Applicable to All Air Operations

- (1) With the exception of the bomb carrying and pressure-drop aircraft and such other aircraft that CJTF-1 may direct. all planes airborne between How minus 2 hours and Hike plus 30 hours will be equipped with a Geiger counter or will carry a monitor with a portable counter.
- (2) Personnel in planes airborne between How minus 2 hours and Mike plus 30 hours, including the bomb-carrying and pressure-drop aircraft, will wear on each person a personnel badge (supplied by the Radiological Safety Section through the Air Nonitors) to indicate whether or not they have been exposed to radioactivity. In each aircraft there will be a minimum of one casualty badge to record possible higher intensities of radiation.

- (3) At MIKE hour no aircraft will be within twenty (20) nautical miles radius of the Target, except that certain alterait whose missions so require may be Eifteen (15) nautical miles radius from the Target (Appendix II to Annex F); and the bomb-carrying airplane and pressure-drop aircraft, which must be 10 nautical miles (slant range) from the point of detonation, going away, at Mike hour plus 40 seconds. Between Mike hour and Mike plus six minutes, no aircraft will approach closer than 8 nautical miles to the cloud column. Between Mike plus six minutes and Mike plus thirty minutes, all aircraft will maintain a minimum distance of 8 nautical miles from the point of detonation and will keep clear of the Radio)ogical Danger Sector, which is defined as an atmospheric and surface area of radioactive contamination that commences at the center of the target array and spreads leeward with the prevailing winds. The Radiological Danger Sector will be announced from Flag Readquatters and will be bounded by true bearings from the center of the target array.
- (4) No plane will approach closer than B mattical miles to the rising column or the visible cloud, or within 10 mattical miles of a visible "downwind" cloud mass, even if equipped with instruments for detecting and measuring radioactivity.
- (5) In the column that follows the ball of fire (Mike hour to Mike hour plus 6 minutes), the radioactive hazard will be pretty well confined to the visible column and to the air within 2 to 3 miles of it. If approached, it should be upwind or crosswind, in the "downwind" areas, the visible clouds will probably be surrounded by an invisible envelope beyond the visible cloud. The downwind "fallout" of tadioactive particles will also be invisible. It is to detect these invisible hazards that radiological instruments and monitors are provided.
- (6) Between Mike hour plus 6 minutes and Mike plus 30 hours, no planes will be airborne in any of the areas occupied or traversed by the cloud and its fallout except (1) those required by the Radiological Safety Section in the execution of the Safety Plan, (2) those specifically cleared by the Deputy Commander for Aviation, or (3) unless Radiological Safety Control, based on reconnaissance, declares the air safe earlier than Mike plus 30 hours. Included in (1) would be planes required for safety reconnaissance and those for air sea rescue and safety patrol.
- (7) (De]eted]
- (8) All planes equipped with monitors or radiological instruments. except pilots in single-seated planes, will, while airborne, maintain a two-way communications contact, on a specially allocated frequency, with Radiological Satety Control. Flag Headquarters. CJTF-1. They will be subject to the satety requirements of this control. Pliots in single-seated planes will maintain such comtact with the Force Fighter Director as safety demands.
- (9) During all air operations, the Commander Joint Task Force One will be continuously advised from Radiological Safety Control.

Flag Readquarters. JTF-1, as to the safety of operating planes and personnel in order that he may terminate the operation or direct such changes in operations as the situation may require for the safety of operating personnel.

- (10) CJTP-1. on advice of the officer in charge of Radiological Safety Control. will direct when and where planes may be airborne, as soon as reconnaissance indicates area of hazard and areas free from hazards due to radioactivity.
- (11) Radiological measurement instruments will be provided by Radiological Safety Section for all manned planes during the air operations except the bomb-carrying and pressure-drop aircraft and others specifically excepted by CJTP-1 above.
- (12) Personnel from Radiological Safety Section will be assigned to units participating in air operations in order to provide required briefing and indoctrimation of personnel for these specific operations, and to provide technical advice and monitoring services essential to safe conduct of the operation. The senior representative of the Radiological Safety Section so assigned will be responsible for getting required instruments and approved goggles to the operating unit and will see that the instruments are properly installed in the plane. He will Issue "casualty badges" and "personnel badges" (film) to personnel before flights.
- (13) All operational planes, including drones, which have been alrborne. between Mike hour and Mike plus 30 hours, will be monitored for radioactivity on landing. This will be the responsibility of the monitor assigned to the air unit for this specific purpose and will not be the responsibility of the monitor within the particulat plane. In monitoring planes, the monitor will pay special attention to the oil filter and to oll splashes on the exterior of the plane where radioactive particles will be held, if at all. on the plane. It is believed that, excepting the drones, no other planes will collect enough radioactive materials to be a hazard to ground crews. In the case of the oil splashes or oil filters that are contaminated, the bazard will have little range (a few feet at the most). Risk will be incurred only by (a) prolonged exposure within a few feet of the contaminated part or parts of the plane (hours, not minutes) and/or (b) direct touch or handling of the oil filter or oil splash. Most radioactive particles will not adhere to the clean skin of the plane. Greasy spots and oil splashes will collect radioactive particles. Hosing down with water would remove most of the loosely attached radioactive particles if there were any there. Air movement (wind) would have the same influence. This would occur (a) naturally in flight. (b) standing in the open (weathering).
  - (aa) "Drones" will be considered as being heavily contaminated until proven otherwise by the monitor specifically assigned to the drone landing site. He will be prepared to keep personnel away from the immediate vicinity of the drone until he has monitored it and advised the local commander of its safety or hazard. He will then advise the local commander as

. . . .

to the necessity for posting sentries, delimiting areas of hazard, and such other actions as are required to protect personnel locally. Ground crews and personnel approaching drones that have been exposed will wear "personnel" badges as provided by, and in accordance with the instructions of, the monitor assigned to the landing site.

- (bb) In the event that seaplanes are forced to land in contaminated waters. it will be the responsibility of the monitor specifically assigned to the seaplane base, or other landing place, to apply such measures as are required for detection of hazard on return of the aircraft to base and make recommendation to the local commander as to actions desirable to protect personnel locally.
- (cc) The above considerations (bb) apply to PBMs engaged in reconnaissance of the air over the lagoon.
- (14) (Deleted)
- (15) [Oeleted]
- (16) Except for certain missions especially authorized by Radiological Safety Control. the pilot of any airplane, upon finding radioactivity, will take immediate evasive action, leaving the area in such a manner as to put the area of contamination directly on his stern as guickly as possible.
- (17) When a pilot encounters a situation such as that described in paragraph (16), he will take the necessary action at once and report the observations and his actions, including position and altitude, to Radiological Safety Control. Flag Headquarters, CJ7F-1 as promptly as practicable.
- (18) The action described in paragraphs (16) and (17) is a "<u>MUST</u>" as life shall not be risked beyond this point.
- (i9) If planes do not encounter conditions depicted in paragraph (16), they will continue with the operation as planned.
- (20) All monitors, and all personnel employing radiological measuring instruments, will keep a log of observations if at all practicable. These logs should confirm the information reported to the Radiological Safety Control. Flag Headquarters, CJTF-1.
- (21) Any air operation may be terminated at any time by the Commander Joint Task Force One on advice from the Chief of the Radiological Safety Section, if it <u>appears that continuation of the operation</u> <u>entails an unwarranted tisk</u>. Reteorological conditions may alter the behavior of the radioactively contaminated column, or of the downwind clouds in such a manner as to present an unpredictable hazard. This is unlikely to occur <u>before</u> Mike hour plus 6 minutes. Likelihood increases progressively <u>after</u> this time, requiring that the initial phase of the air operations be concluded by Mike hour plus 30 minutes.
- (22) "Casualty badges" (films) and "personnel badges" (films) used in air operations will be collected by personnel of Radiological

Safety Section upon completion of the operation. These devices will be suitably labelled and as promptly as possible returned to Photometric Division. Radiological Safety Section on board HAVEN for processing.

- (23) Personnel and planes engaged in these air operations will be nonitored by personnel of the Radiological Safery Section immediately after landing. Observations will be logged and where significant readings are found, reported at once to Radiological Safety Control, Flag Headquarters, CJTF-1.
- (24) If planes for press, radio, nonparticipating observer, or photographic purposes are alcourse during the period of the air operations, or thereafter, they will comply with the requirements of this appendix.
- (25) Should any plane be unable to maintain contact with the Force Fighter Director, and hence be unable to get directions relative to hazardous areas, the pilot will take such action as will take him at once toward safer upwind areas and withdraw from the oper ation until communications are teestablished.
- (b) Protection of Eyes at "H" Hour
  - (1) General-purpose goggles fitted with ND 4.5 Filter Replacements will be provided all personnel airborne at "H" hour. An exception is in the case of the Navy Drone Dnit (Task Unit 1.6.1), which will employ a special blue-amber combination of light filters specified by dispatch. No other unit will deviate from the use of ND 4.5 goggles unless so authorized by CJTF-1. Senior radiological monitor attached to air operation units will see to it that they are available and will check to see that all personnel airborne at this time are so equipped before taking to the air. He will also see to it that they have had previous instructions in the proper use of the goggles and in eye protection.
  - (2) The bombardier on the bomb-carrying aircraft will announce a warning to put on goggles at two minutes before the time of bomb release. At start of the automatic tone signal (one minute before bomb release). all personnel will adjust the goggles over their eyes. (Note exception as to copilots in para. 3.(b)(4) below.) Immediately after announcing "bomb away" for the last time, the bombardier will issue his final warning to put on goggles.
  - (3) At signal for bomb release ("bomb away." stop of tone signal), as an extra precaution all personnel will turn their faces away from the target until after the flash of light and heat occurs, after which time they may immediately remove the goggles and observe the rise of the incandescent column or cloud.
  - (4) Copilots in planes with copilots will take extra precautions to ensure greater safety. They will attempt to protect eyes completely. Copilots will have goggles adjusted by Release minus 5 minutes. At start of automatic tone signal (one minute before book release) copilots will cover goggles and eyes with bent arm in order to completely protect the eyes. After the flash, arm and

goggles may be removed and the column observed. This will permit copilots to take over in case pilot is temporarily biinded.

(5) The chances that a pilot will be partially blinded while using these goggles are remote, particularly if the pilot's position is such that he cannot, or does not, view the explosion directly.

 The Chief of the Radiological Safety Section will issue to the force such additional safety precautions as are necessary.

#### APPENDIX IX

# GENERAL CONSIDERATIONS RADIOLOGICAL SAFETY TEST BAKER

# 1. PHENOMENA ACCOMPANYING THE EXPLOSION

In Test BAKER, the mechanism of the nuclear reaction will be identical with that in Test ABLE. However, since the explosion in Test BAKER will occur in a water rather than in a gaseous medium, the phenomena that will be observed as a result of this explosion will be guite different from those that were seen in Test ABLE.

In Test ABLE, the sphere of hot gases formed by the nuclear reaction has been aptly described as a "ball of fire" that rises rapidly toward the stratosphere. In Test BAKER, the hot gases will take the form of a rapidly expanding "bubble" below the surface of the water of the lagoon. This "bubble" quickly rises to the surface of the water. It is the interaction of the "bubble" with the water that is responsible for the new or modified phenomena that are described below.

#### A. RADIATION

The water that encloses the "bubble" is much more effective in absorbing radiation (both gamma cays and neutrons) than is air. Hence, the primary radiations produced by the nuclear reaction will have a much smaller range than they did in the ABLE shot.

B. HEAT AND LIGHT

The water will cool the hot gases much more rapidly than did the air. Hence, the temperature of the "bubble" when it reaches the surface of the lagoon will be low as compared with the initial temperature. This means that heat and light will not be emitted in intensities that will injure persons nearby. Observers in the air and in surface vessels will see an illumination of the water and overlying clouds but will not be conscious of a "ball of fire" rising from the surface of the lagoon.

# C. VATER BLAST

The water will accept a certain portion of the energy of the "bubble." This energy will then be propagated in the water outwards from the explosion in the form of a shock wave. This water blast will be more damaging to ships' hulls than was the airblast (the analogue of the water blast in the previous test). Probably, various reflections may either enhance or diminish the forces exerted in different locations so that the damage may not be uniformly or symmetrically distributed about the center. This has its analogue in airblast also.

## D. MOVEMENT OF THE WATER

The rapid expansion of the "bubble" will cause a number of different types of responses in the surrounding water: (a) A mound of water and steam in the "dome" above the expanding gas bubble will be thrown upward from the surface of the water. This water will rise to a height estimated to be 5,000 to 8,000 feet and before breaking up into spray will have a calculated diameter of about 2.500 feet. (b) After the water from the "dome" has ceased tising. its summit will be pierced by a jet of water forced up from the bottom of the lagoon with the collapse of the gas bubble. This jet of water, called the "plume," may extend vertically two or three miles into the air in a matter of 10 to 15 seconds. Most of the water will fail to the lagoon in a matter of minutes. A small fraction of the water may remain suspended in the air as vapor. This column of vapor has been called the "ghost plume." Some of the gaseous detonation products in the "bubble" may escape up the ascending water and spray mass and collect about the top of the plume. These will be radioactive.

E. WAVE\_FORMATION

As a result of the movement of the huge masses of water described under section D, waves will be produced on the surface of the lagoon. These waves will spread out from the point of deconation in a concentric fashion. The waves will probably not be greater than 50 to 75 feer in height and 500 yards in length. At a radius of 4.000 feet the wave height will decrease rapidly as the waves move outward.

## F. DISPOSITION OF FISSION PRODUCTS

As the bubble disappears, the fission products formed by the nuclear reaction will be dispersed in the water of the lagoon, as well as in the water of the dome and the plume. It is estimated that fifty percent or more of the fission products will be present in a circumscribed area in the lagoon within a few minutes after the explosion. Water vapor containing fission products will remain in the vicinity of the plume as a "ghost plume." The upper portion of this ghost plume may eventually form a low-lying cloud that will be carried off by the prevailing winds. It is possible that such a cloud may draw in the fission products from a wide area and concentrate them in the form of rain. The high-level mushroom-shaped cloud so characteristic of nuclear explosions in air will

not occur in this test. although a small cap of vapor may develop at the top of the plume.

#### 2. HAZARDS RESULTING FROM THE EXPLOSION

The hezards resulting from Test BAKER can be divided into two types according to the time at which they make their appearance.

#### A. IMMEDIATE HAZARDS

(1) LIGHT AND HEAT

The water will shield the observers from the initial intense tlash of light and heat and will capidly cool the bubble so that these factors will not present a serious hazard to observers. Thus, the explosion can be viewed with safety by the naked eye from a distance of 7 or more miles.

(2) WATER AND AIR BLASTS

The blast waves will not be strong enough to affect ships at a distance of ten or more miles from the point of detonation, particularly because of the interposition of the reef.

(3) FRACHENTS

It is possible that large fragments may be accelerated to high speeds in the air and that their trajectories may extend for considerable distances. It is extremely unlikely that these fragments will cover a distance of ten miles.

(4) <u>EAVES</u>

A series of waves on the surface of the lagoon will be form ' by the explosion. These waves may have an initial height of 50 to 75 feet, but will repidly expend their energy and probably not wash over Sikini Atoll. The waves will not endanger ships at a distance of 10 miles.

(5) RADIATION

The range of the gamma rays and neutrons produced by the nuclear reaction should be much less than that in Test ABLE because of the radiation-absorbing properties of the water surrounding the "bubble" as it is formed. The fission products present in the "bubble" then will be mixed intimately with the water in the plume and lagoon. Those fission products in the plume should emit intense radiation over a small distance in the air because there is considerable absorption of radiation by the water in the plume. Hence, there is no reason to believe that there is a hazard from radiation at the points of observation.

## DELAYED MAZARDS

## (1) <u>DELAYED HAZARDS OF THE WATER OF THE LAGOON</u> <u>AND TARGET VESSELS DUE TO RADIOACTIVITY</u>

It is estimated that the greater part of the fission products will be present in the lagoon after the water in the plume bas returned to the surface. Most of the radioactivity that has not

gone up in the air will be uniformly distributed throughout the volume of a cylinder of water whose central axis will be formed by a line drawn upward to the surface of the water from the point. of detonation. Most of the radioactive fission products in the water and spray that return to the lagoon from the plume will probably fall around and over this cylinder and shortly thereafter form a tongue on the surface extending several miles in the downwind direction from the contaminated cylinder described above. All ships in the area accupied by the tongue thus will be heavily contaminated by radioactive materials falling from above. Thus, it is the hazard from the radiation emitted by the fission products present in the large volume of water in the target area that present the greatest hazard to personnel returning to the lagoon. The bazardous radiation will be primarily gamma and beta in that acter. Beta rays are dangerous only if the radioactive materials are kept in contact with the skin for a long period of time or if the materials are taken into the body in appreciable quantities. The danger to personnel from inhalation or ingestion of radioactive materials is nonexistent when the radiation hazard in the cleared area is below 0.1 R/24 hours.

(2) <u>DELAYED HAZANCS OF THE WATER OF THE AIR</u> <u>IN THE REGION OF THE "CHOST PLUME" DUE</u> TO HADIOACTIVITY

> The residual radioactive materials that have been left in the air with water droplets in the ghost plume should be rapidly carried away by the prevailing winds within thirty minutes after the explosion so that there should be no danger from these materials except in the downwind region.

(3) <u>DELAYED HAZARDS OF THE CLOUD DUE</u> TO RADIOACTIVITY

> As mentioned above, it is possible that the upper portion of the plume may form a low-lying cloud, the radioactivity of which may be precipitated in the form of rain in the downwind area. This hazard may be greater in Test BAKER than in Test ABLE since the airborne radioactive material will be concentrated in the lower aititudes. However, for the same reason, the danger sector will be narrower in the BAKER Test.

#### 3. PROTECTION

- Against the primary effects of radiation, distance will provide necessary protection.
- B. Against the secondary effects due to excessive waves, airblast and underwater shock, distance will provide necessary protection.
- C. Against the secondary hazards due to radioactivity, <u>detection</u> and avoidance provide the best means of protection. This will form the basis of the Safety Plan as far as radiological hazards are concerned.

4. DETECTION AND MEASUREMENT OF RADIOACTIVITY

Suitable instruments will indicate both the presence and intensity of the radioactivity at a given place. The methods successfully employed in Test ABLE will be used. Instruments will include Geiger counters. protextmeters. pencil electrometers, ionization chambers, personnel badges (film), casualty badges (film), surface tate meters, underwater counters, "probe" meters, etc.

## 5. AVOIDANCE AND MEASUREMENTS

Area reconnaissance, maintenance of "contamination situation maps," designation of contamination areas by suitable means to JTF-1, and the posting of dangerous areas in ships or on land surfaces will constitute the active measures of avoidance. Exposures in excess of 0.1 roentgen per day will be avoided and this will be the limit of tolerance acceptable during the operation. This can be effectively measured by the methods employed in Test ABLE. This is well within the safety limits. In Test BAKER, due to the greater intensities of residual radioactivity anticipated. It will be particularly necessary to observe this limitation of exposure.

- 6. ANTICIPATED HAZARDOUS AREAS
  - A. IN THE ALR
    - (1) Air immediately over the surface of the lagoon, particularly directly over the center of the target array, may be dangerous due to: (a) radiation from surface of the water of the lagoon and from the target ships, and (b) to failout of mist containing radioactive materials,
    - (2) The most serious radiation hazard will exist in the air within 3 feet of the surface of contaminated water. This will be particularly serious in the surface water initially in the central rarget area and particularly during BAK6R Day. The intensity of gamma radiation from the target area water will be great enough to be hazardous for vertical distances of from 500 to 4.000 feet. These hazards due to water contamination may persist for several days and decrease in intensity with time and dilution with clean lagoon water. It is likely that the air for some distance above the surface of the water of the lagoon and downwind of the explosion may present a relatively high content of radioactive materials in mist or vapor that will be hazardous to planes flying at altitudes of 500 to 1,500 feet for several hours.
    - (3) Beyond the lagoon and downwind there will be an airborne hazard due to radioactive mist or particles. In some instances this may be held up in a low-level cloud, which may present a serious hazard. This may travel downwind for a distance of 100 to 150 miles of more. At a distance of 200 to 300 miles, it is unlikely that any air hazard may exist for air operations. Airlanes at a distance of over 400 miles will be endangered at no time.

## B. IN THE LACOON

- WATER HAZARDS
  - (A) SURFACE WATER

The surface water (to a depth of 4D feet) will contain radioactive particles that are initially deposited in the central atea of the target array and will tend to move down current at a rate of approximately 0.5 knot. Downwind of this central area, there will be additional contamination of surface water as a result of water falling from the "plume." This will make surface operations dangerous downwind and down current from the central area for an unpredictable time since the exact pattern of the contaminated surface area cannot be predicted, since much of it will depend upon the character of the surface winds and waves and the height and characteristics of the "plume" arising from the explosion.

- (B) Subsequently, the surface water will receive an additional contamination. This may arise from contaminated water that has formerly been in the lower layers of the lagoon and moves in the opposite direction to the surface layers; thus, this deep layer can come up to the surface (upswell) upwind to the target area. Yollowing this upswelling the deep water mixes its contamination with the surface water and moves downcurrent with it. It is anticipated that many subtle hazards difficult to forecast may arise in the water of the lagoon during the first three or four days. Later, the distribution of the radioactive material within the water of the lagoon may tend to be more homogeneous. Brisk surface winds will tend to favor mixing and dilution. Some surface water will leave the lagoon and will carry with it some radioactive material. Some entrances to the lagoon may be hazardous as a result of this. Winds, tides, and length of time decay following a detonation will exert important influences in this respect.
- (C) SUBSURFACE WATER

Subsurface water (below 40 feet) will be contaminated with radioactive material initially in the region of the central target area. This will tend to move generally to the east "upwind" at a rate of approximately 0.1 knot (while the surface moves to the west at approximately 0.3 knot). Mixing and diffusion of the radioactive material within the water may be so slow as to prolong the persistence of very hazardous undituted masses of water with high radioactivity. This may give rise to irregular areas or patches both below the surface and on the surface of the water of the lagoon.

- (2) <u>HAZARDS IN TARGET SRIPS</u>
  - (A) TOPSIDE SURFACES

Topside surfaces will become contaminated with water containing radioactive materials. This will arise from water failing from the "plume" and from contaminated water of the lagoon being splashed on the target ships. In general, there will be negligible induced radioactivity in the metals of the ship. Evaporation of the water will tend to leave radioactive fission products dried on the exposed surfaces of the ships.

(B) RELOW DECKS

Relow decks and in compartments of the target ships, radioactive hazards will be found due to some exent to radioactivity in the water outside the compartment or radioactive material on the surface of the ship. In the main, the more serious hazards will arise from water initially highly contaminated and trapped within the compartment. Due to the fact that this water will usually not be diluted by water from without the compartment, the benefits of dilution, mixing, and dispersion will be lacking. This will result in localized hazards of relatively high intensity and probably with greatly increased persistence.

(C) HAZARDS ON THE ISLANDS OF THE ATOLL

If waves of contaminated water roll over the land surfaces. radioactivity may be found in these areas. It is likely this will <u>not</u> occur during the early phases following the explosion as the contamination within the water is well localized. Later, land surfaces downwind may be contaminated by water or mist settling out from the air. Later, also contamination within the water of the lagoon may extend into such areas as may wash up on the sandy beaches of the islands. Lesser contamination may be found at variable distances from the beach, depending on how far the wind may carry contaminated spray and droplets in from the beach. Serious hazards will hardly be developed in this manner.

(D) HAZARDS AT A DISTANCE

Aitlanes beyond 400 miles will not be endangered at any time. It is probable that no hazard will exist for planes operating at distances beyond 300 miles. Special monitoring is desirable for islands within 200 miles downwind. Contaminated water leaving the Jagoon will not set up hazards at a distance beyond 50 miles. It is believed that projectlies will not create a bazard beyond a distance of 10 miles from point of detonation.

## 7. ESTIMATE OF RADIOACTIVE HAZARDS IN RELATION TO OPERATIONS

# A. <u>SELECTION OF A DAY TO SHOOT</u>

If the winds at all altitudes below 25,000 feet are within a sector no greater than  $5^{\circ}$ , and if this sector lies within  $45^{\circ}$  and  $135^{\circ}$ T, the most suitable conditions will exist with regard to radiological safety. Winds from the southeast will not be as desirable as those from the east or northeast due to the greater likelihood of upwelling of contaminated water in the lagoon near the entrance to Envu Channel.

# B. SAFETY OF SHIPS OF PORCE

- (1) If at the time of detonation all ships of the Force are stationed upwind of the detonation and not closer than 10 nautical miles to the central target area, they will be safe from any effects of the explosion.
- (2) Subsequent to the detonation the radioactivity that is airborne will be cattled downwind and away from the areas to which the ships have been assigned. By the time reentry can be attempted, no danget from particles falling out of the air will exist within the lagoon.
- (3) During reentry, it will be necessary for the radiological reconnaissance of the lagoon to establish the distribution and characteristics of the radioactive contamination within the lagoon before any ships may be permitted sore than limited entry. It may be possible to have ships essential to the early reentry and safety reconnaissance operations approach within the entrance to the lagoon where they may be safe until the termination of that working day. This possibility seems likely due to the fact that diffusion and dispersion of the radioactive products within the water is expected to be slow enough on BAKER Day to safely permit. essential ships to enter just inside the lagoon, but prepared to withdraw on an hours notice and planning to withdraw from the lagoon before dark. By BAXER plus one day. It is expected that the contamination within the water may have spread in such a manper as to constitute a hazard that can be determined only by radiological safety reconnaissance. During the first few days following BAKER Day it will be necessary each day to conduct a cautious safety reconnaissance and limited reentry operation. It is likely that ships not essential to the early reentry phase and to the safety reconnaissance cannot reenter the lagoon for five or more days. Hozards that may be anticipated in connection with boating and with the operation of the ships may make such ceentry. of other ships impracticable if not actually unsafe.

## C. AIR OPERATIONS

#### PERIOD MIKE TO MIKE PLOS JO minutes

There is strong evidence to indicate that the hazard from blast, heat, and light will be essentially negligible. There is also good evidence to believe that during the first six minutes that the radiological hazard will be confined to a cylinder not to exceed 5 miles in radius and extending vertically upward. After 6 minutes the hazard tends to move downwind as the spray and mist are carried by the wind. Operations outside the prescribed RADEX will be safe provided that the visible cloud of mist or shower of water (if any) is avoided at a minimum distance of 5 nautical miles and that the intensity of radioactivity does not exceed C.F roentgen per 24 hours. While the intensity of the radioactivity during this period is believed to be high, its distribution will probably be quite localized and limited to the area to be designated as RADEX. Operations within this area would be dangerous during this 30-minute period.

- (2) PERIOD AFTER MIKE PLUS 30 minutes
  - (a) PSM CHARLIE

It is unlikely that there will be any hazard from mist or failout after Mike plus 30 minutes, but it must be anticlpated as the central target atray is approached. The contours of radioactivity from the surface of the tagoon will be approached coutiously in the same manner as in Test ABLE. It is not known whether this will be observed at greater altitudes. This information will be ascertained by this reconnaissance. The intensity of the cadiation given off from the water surface will be greater at lower levels, i.e., from surface up to 4.000 feet.

(b) PBM DOC

It is unlikely that any radioactivity will be encountered in the air over the ships of the force. Recontaissance of the air over the lagoon will be detected as in Test ABLE.

- (c) Personnel in helicopters, if operating over contaminated areas of the lagoon, would be in danger of falling into dangerous water in case of engine failure.
- (P) Planes operating in the air over the lagoon will be exposed to radioactive effects, if they enter those areas that PBM Chailie and PBM Dog ascertain to present a radioactive hazard. The day-to day changes in these areas can be determined only by the reconnaissance of these areas on successive days by PBM Charlie and PBM Dog. Surface reconnaissance may assist in localization of these hazards in the air over the lagoon. This hazard may not be important after BAKER plus one day.
- (e) Planes operating near the lagoon after Mike plus 30 minutes will not be exposed to radioactive bazard if they avoid the downwind sector provided by an extension of the radial boundaries of the RADEX. In general, this area in Test BAKER will be similar to the Surface Survey Sector. It will extend for 150 miles from the central target area.
- (f) Air-sea rescue planes cannot operate within the lagoon until the water is safe radiologically.
- (g) PBM planes of Bikini-Kwajajein air shuttle will not be able to operate from the lagoon until a suitably safe anchotage for the seaplane tender can be provided. This is unlikely before Mike plus 5 days.
- D. DRUNE BOAT OPERATIONS

The operation of BEGON and the TBM planes will be in safe area: hazard of this operation lies in the handling of the radioactive water samples. Adequate protection can be provided in the manner planned. This may be accomplished by using several persons for short times, i.e., still within the period required to give ... more exposure than 0.1 roentgen.

#### E. LAGOON PATROL

The POMs and LOPLs will commence operations within the lagoon at a time when there is no danger of failout from the air. Initially they will probably be able to advance well within the entrance to the lagoon and with safety detect and outline the contaminated surface layers and the deeper layer, which may upwell in unexpected places. It appears to be likely that this phase of the operation can be successfully conducted on BAXER Day. The operation on PAKER Day plus one will have to be initiated more cautiously than on SAKER Day due to this uncertainty of the spread of the contamination within the water of the lagoon. It is possible that the teconnaissance of the waters of the surface layers of the lagoon and of the lower layers may be required beyond five days. During this operation the air within 3 feet of the surface of the water will contain the most significant radioactivity. The methods of protection employed in Test ABLE will be equally successful in Test BAKER. "Hot" areas that upwell may "trap" PGMs or LCPLs, so this hazard will be anticipated. Destroyers operating within the lagoon would anticipate similar hazards as the small craft.

F. DESTROYERS

The likelihood of a serious radioactive hazard within 50 miles of the lagoon on the downwind side will be much more likely than in Test ABLE. Within 20 miles of the lagoon, this will probably be confined to the Surface Safety Sector. The intensity of the contamination due to fallout on the surface of the ocean cannot be predicted with accuracy, but it is probable that it would fail quickly due to dilution and dispersion within the water. A cautious approach to the boundaries of the Surface Safety Sector will be required. The methods employed in Test ABLE will provide ample protection to personnel in the destroyers. Instructions from Radiological Safety Control will assist, during the operation, the destroyer units in locating and avoiding dangerous areas. Contaminated water from the lagoon will probably not be found until BAKSR Day plus one. The movement from the lagoon can be tracked with safety, employing methods employed by the Destroyers on ABLE day.

- G. REBOARDING OF TARGET SHIPS
  - It is likely that the water of the lagoon may be radiologically safe for Initial Boarding Teams to traverse prior to the time that they may attempt to board the ships.
  - (2) <u>Initial Boarding Teams</u> will encounter a variety of hazards of radioactivity. While this is due primarily to the high intensity of radiological contamination of the water of the lagoon, the next important factor will be the probable irregularities of areas of hazard within the target ships. This will require a more cautious and probably slower topside reconnaissance than in Test ABLE. Exterior surfaces may be contaminated with radioactive particles that adhere to the surface after contaminated water evaporates and leave a persistent deposit.
  - (3) Inspection Teams A and B will encounter hazards not encountered in Test ABLE. Compartments that are flooded or to which radioactive water gains access may be hazardous. The prevention of

dilution and the retention of highly contaminated water in this manner will constitute a serious hazard. The intensity and the duration of this form of hazard cannot be predicted. The special preparation and training of monitors in this aspect of the operation will facilitate the movement within the ships and provide adequate safety.

(4) <u>Instrument Teams</u> reboarding target ships will encounter the bazards characteristic of the phase at which they board the target ship, namely Initial Boarding Team or Inspection Team phase.

## H. FIREFIGHTING AND SALVAGE

Fittfighting and salvage operations will be limited in the early phases by the intensity and distribution of the contamination of the water and by the radioactivity of the target ship, or ships, involved. It is unlikely that such operations can be conducted prior to BAKKR Day plus two, probably later. Monitors specially trained to assist in the conduct of such operations will be necessary.

I. DIVING\_OPERATIONS

Diving operations will be hazardous as long as the water in the lagoon is radioactive. Water at all depths must be monitored. It is impossible to predict just what radioactive hazards may exist in or near sunken ships. Methods employed in later phases of Test ABLE will be equally successful in ascertaining the presence, intensity, and distribution of such hazards.

J. REENTRY OF SHIPS OF THE FORCE

Reentry of ships of the Force will probably be delayed beyond BAKER Day plus four. Until the water of the lagoon is radiologically safe from the standpoint of small boating and from the standpoint of operating evaporators and condensers it will probably be impracticable to have the ships of the Force reenter the jagoon and take up permanent anchorages.

K. REOCCUPATION OF TARGET SHIPS BY SHIPS' CREWS

Reoccupation of target ships by ships' crews will be delayed. The time at which this may take place can only be determined by the situations oncountered by the Reboarding Teams. Careful monitoring will be required until it can be shown that habitation within the ship is safe and the conditions required for the normal operation of the ships are known to be safe.

## 8. FACTORS TENDING TO REDUCE DANGERS FROM PREDICTED RADIOACTIVE HAZARDS

A. FROM GAMMA RADIATION

Despite the fact that enormous quantities of high-energy radiations may emanate from the contaminated water and cloud there are certain physical facts that will make it possible ' approach and delineate such areas without excessive danger. They may be listed as follows:

 The intensity of radiation will diminish with the distance from the source.

- (2) There will be considerable absorption in the intervening air between observer and source.
- (3) The geometric consideration will also influence the distance of approach to the contaminated area. Since the source will be spread over a wide area. Flights over the area will be subject to radiation at various angles from the entire source. On the surface, however, the subtended angle will be so small, an individual will be affected only by material on the near side of the cuntaminated area.
- B. FROM BETA RADIATION

To receive excessive amounts of beta radiation in a situation such as Test BAKER. It would be necessary to come in very close contact with the contaminated material. Protection from this will be unnecessary if the gamma radiation intensities are low.

- C. The radioactive materials in the air and the water of the lagoon will become less in quantity and concentration with time. The factors that tend to bring about this diminution are as follows:
  - (1) DECAY WITH TIDE

The mixture of [ission products is known to decay inversely with time. In hours.

(2) DIGUTION AND DISPERSION

There will be slow but appreciable dilution with the surrounding media (air and water). Mixing will occur in both vertical and horizontal planes.

(3) TRANSFERRENCE

There will be gradual transfer of materials away from the test site by wind movement in the air and by currents in the water.

Serial: 019

30 August 1946

From: Commander Task Group One Point Two, 3TF-1

To: All CROSSROADS Activities on Kwajalein -- Bikini Area

Subject: Safety Precautions Incident to Boarding Target Vessels Laid-Up at Kwajalein and Bikini

1. Boarding of the target vessels now laid up at Kwajalein and Bikini will be necessary from time to time during the coming months in connection with such work as amounition inspection and disposal, scientific investigation, inspection and maintenance of watertight integrity and structural safety. etc. These vessels, in addition to the hazards which are inherent in any uninhabited ship which has been closed up and laid up for a long period of time, present certain other peculiar hazards which are the direct consequences of the participation of the ships as targets in the two atomic bomb tests of the past summer. These hazards, to which all personnel boarding these ships will be subjected, fall into four general categories as follows:

- (a) Radiological hazards
- (b) Explosive hazards.
- (c) Hazaids due to concentration of poisonous or noxious gases and vapors in enclosed spaces
- (d) Structural hazards.

2. The purpose of this letter is to summarize in convenient form the hazards to be expected and the safety precautions to be observed when boarding the target ships. It is not intended to be a treatise on the subject. All responsible officers are expected to read and familiarize themselves with [sources of safety information cited but not reproduced herein], and by appropriate instruction and indoctrination of their men. familiarize them with the dangers of the job in hand in order that their own ignorance will not lead them into danger or disaster.

It is emphasized that all possible dangers and emergencies which may arise cannot be covered in this letter, and that responsible officers are expected to exercise prodence and sound judgment in dealing with any situation not specifically covered herein.

- 3. GENERAL RULES
  - (a) All target ships, regardless of their previous radiological history, or the amount of CROSSROADS work previously expended on them must be assumed to be radiologically hazardous. Parties boarding them will invariably be accompanied by radiological monitors, and all radiological safety precautions will be scruppiously observed.

- (b) The predominance of one type of bazard in any particular job to be done must not be allowed to prevent consideration of other types of bazards which may be simultaneously present. even though in lesser or supposedly negligible degrees.
- (c) Safety of personnel shall be the governing consideration at all times. No job is of sufficient urgency or importance to justify departure from this guiding principle.
- (d) The <u>Pensacola</u>, because of the presence on board of dangerously unstable 8-inch powder. is out of bounds to all personnel. No one shall be permitted to board this vessel without the express authority of SOPA in each instance.

Due to the unusual character of the conditions existing in the <u>Pensacola</u>, special instructions with regard to this ship will be issued at a later date.

## 4. RADIOLOGICAL HAZARDS

- (a) [CTG 1.2 Serial 699, 17 Aug 1946] will be the governing directive for radiological safety of personnel working on target vessels. Salient points of this directive, as well as additional precautions pertinent to the nature of the work to be done. are set forth in the following subpatagraph.
- (b) While on the job, personnel will wear only the work clothing which is specifically issued to them for that purpose on the APL-27.
- (c) Despite consideration of physical confort, sieeves will be rolled down and gloves and proper footgear will be worn while working on target ships.
- (d) <u>All</u> individuals while on the job will wear film badges. Which will be issued, collected and processed in accordance with existing instructions.
- (e) Monitors will invariably be produced and clearance obtained from RadSafe prior to boarding. Required advance notice will be given in so far as practicable.
- (f) All personnel will be processed through the APL-27 for issue of clothing and for radiological decontamination on the way to and from work on the target ships. Since this activity is well established and familiar to all concerned, detailed instructions for its operation are not repeated here. The activity will be administered by the Commanding Officer of the <u>Geneva</u> and subsequently by the Commanding Officers of such vessels as may successively relieve and take over the functions of station ship and hotel ship now being performed by the <u>Geneva</u>.
- (g) With the decontamination center on the APL-27 in operation and the use of "sour" boats, it is not believed that the prevention of contamination of non-target ships will present a serious problem. RedSafe will make periodic surveys of non-target ships and will issue such instructions from time to time as are deemed necessary.

- (h) Boats used for carrying working personnel back and forth between the APL-27 and the target ships will be monitored and scrubbed when necessary as described in [CTG 1.2 Serial 699].
- (1) With the possible exception of annunition disposal, the remaining work to be done on the target vessels will not involve the same degree of intimate contact with sources of contamination as did the earlier decontamination work on these ships. Nevertheless, the same dangers still exist, and the same precautions will be exercised.
- (j) Working parties will be kept concentrated as much as possible and men will not be permitted to roam about the ship at random.
- (k) All hands should be warned that standing pools of water about the decks, even in supposedly uncontaminated parts of the ship, are potentially serious radiological hazards. The reason for this is that during rain squalls water may wash over a contaminated part of the ship's structure and then be carried through the drainage system and deposited in a clean part of the ship.
- (1) Ship's blowers will not be operated except when necessary, and then only when the ventilation system has been checked by RadSafe and cleared for operation.
- (a) Due to the danger of inhaling radioactive dust, no dry sweeping of dusting will be done on any part of the target vessel. It is not considered likely that any work of this nature will be required. If accumulation of dirt or trash interferes with efficient working, it will be removed by hosing down. If practicable, otherwise by wet brushing or wet swabbing. Swabs it used will never be wrung out by hand but will be taken topside and placed in a bucket of water. If available, otherwise hung on the life lines to dry.
- (n) The danger of ingestion of radioactive material by the mouth must always be borne in mind. All working personnel must be made conscious of this danger and instructed not to eat or smoke or otherwise place contaminated hands in. on, or near the mouth. Lunches will under no circumstances be served to men on the target vessels and working parties will not be fed until thay have been processed through the decontamination center on the APL-27.
- (o) No men with open wounds not securely covered and protected by bandages will be permitted to perform work on target vessels, and officers in charge of working parties will be vigilant to detect and eliminate men with such wounds. This precaution particularly applies to wounds on the hands, which should not only be bandaged but also protected by rubber gloves while working. Any wound, however small, received while working aboard target vessels should be immediately scrubbed well with soap and clean water. The injured man will then be processed through the decontamination center and taken to sick bay on the <u>Haven</u> where surgical debridement may be performed.
- (p) Handling of objects on board target vessels will be reduced to the minimum required by the nature of the work to be done. The

practice of taking objects as souvening from target ships will be vigilantly guarded against and sternly suppressed.

- (q) No personnel shall go below decks on target vessels unless wearing oxygen rescue breathing apparatus or positive pressure xask.
- (r) An additional inhalation hazard exists in connection with such mechanical operations as cutting and chipping. Personnel performing such work will wear rescue breathing apparatus or positive pressure masks.
- (s) if evaporators are opened for any purpose, such as removal of tubes or scale, all personnel on the job will wear rescue breathing apparatus or positive pressure masks. Shirt sloeves will be rolled down and rubber gloves will be worn. A radiological safety monitor will also be in attendance.
- (r) Any articles or materials to be removed from target vessels will be monitored in an area where no contamination exists prior to being taken aboard any non-target vessel or sent to any shore installation.
- EXPLOSIVE HAZAROS [not reproduced].
- HAZARDS DUE TO NUXIOUS OR POISONOUS GASES OR VAPORS (not reproduced)
- STRUCTURAL HAZARDS [not reproduced]

## TASK GROUP 10.12 OPERATION PLAN CumBikResurvGroup No. 1.4/

# ANNEX J

# RADIOLOGICAL SAFETY AND HEALTH PLAN

#### I. ORGANIZATION

- A. Radiological Health Section
  - Evaluation of radiological bazards and recommendations for safety procedures
  - 2. Photographic dosimetry
- B. Radiological Safety Section
  - Monitoring operations
  - Decontamination "change stations"
- C. Radiological Health Advisory Board
  - This Board will consist of the Radiological Health and Safety Officers and such scientific personnel as may be appointed by the Project Officer of the resurvey. It will advise, evaluate, and make recommendations in writing to the Radiological Health Officer in special radiological health matters not covered in Buffed directives; i.e., radiological clearance of questionable areas.

# II. STAFF

- A. Radiological Health Officer
- B. Radiological Safety Officer
- C. Radiological Health Advisory Board

## III. MISSION

The mission of the Radiological Health and Safety organization will be to protect personnel from radiological health hazards that may be encountered in the Bikini Scientific Resurvey operations.

- IV. TASKS
  - A. The Radiological Health Officet and the Radiological Safety Officer will prepare the Health and Safety Plans to be followed in this operation. and will be responsible for the execution of radiological health and safety directives. They will organize and direct all med ical and technical elements of the operation required to execute this plan.
  - B. The Radiological Health and Radiological Safety Plans are attached bereto as Appendixes I and II, respectively.

## Appendix 1

## Radiological Health Plan

#### 1. RECOCNIZED RADIOLOGICAL HAZARDS

- A. Two types of radiological bazards are recognized: "external radiation" and "internal radiation." The former is the type received when standing in the path of a powerful X-ray beam. The latter produces an effect similar to that resulting from the ingestion of radium or the inhalation of radioactive dust.
- B. Because of the natural radioactive decay that has taken place since Test A and Test B. the "external radiation" hazard is of lesser importance, but in some localities may prove to be dangerous.
- C. The "internal radiation" hazard, however, may still be important. It is characterized by the fact that the injurious material produces damage only when it gains access to the body through ingestion. inhalation, or through breaks in the skin. It may best be visualized on the one hand as comparable to the hazard present in the mining of radioactive materials (inhalation), and on the other to that encountered in the painting of radium dials (ingestion). Even in cases of extreme exposure, characteristic clinical findings may not appear for several years. Even when the exposure is not sufficient to cause death. it may produce tumors in various tissues.
- II. ESTIMATE OF CURRENT RADIOLOGICAL HAZARDS
  - A. General Information
    - The detonation of an atomic bomb liberates an enormous quantity of electromagnetic radiations and neutrons. The electromagnetic radiations include infrared, visible light, ultra-violet light, X-rays, and gamma radiation.
    - Thereafter, the products formed during the fission process emit gamma rays and beta particles, constituting the "external radiation" hazard.
    - The bomb also releases other products that constitute an "internal radiation" hazard.
  - B. Present Hazards as a Result of Test A (airblast)
    - 1. None.
  - C. Present Hazards as a Result of Test B (underwater blast)
    - In an underwater burst such as Test 8, the radiation resulting from residual radioactive products still may be of considerable magnitude.
    - The products of fission sometimes are absorbed and concentrated in and on ships, corals, algae, and animals. At the present time, radiation hazards of this sort seem remote.

- - -

- 3. However, the highly dangerous unfissioned material producing alpha radiation has a half-life of several thousand years, and will be practically undiminished in intensity due to decay. It was more or less concentrated immediately following Test B. but probably will not be more widely distributed within the atoll area.
- These unfissioned alpha emitters, together with the fissioned beta- and gamma-radiating products, will occur in greatest concentrations in the area of the coral crater produced by the underwater blast.
- The sunken ships in this area can be considered contaminated to a relatively high degree, and other areas throughout the lagoon will be considered dangerous until radiologically cleared.
- Algae. fish. and other marine organisms may contain relatively high concentrations of both fissioned and unfissioned materials.

#### III. PERSONNEL PRE-EXAMINATION

- A. All personnel. both military and civilian, who are to participate in the Bikini Scientific Resurvey will be required to have a special physical examination prior to entering upon such duty.
- B. Special medical records. separate from the individual's health records. will be set up under the cognizance of the Radiological Health Officer. and will be classified Confidential.
- C. Particular attention will be given to a history of skin sensitivity and respiratory allergy, and it will be necessary to eliminate from contact with radioactive material personnel who have chronic infections or chronic conditions of any nature, particularly skin or respiratory infections, blood dyscrasias, extensive fungus infections of the skin and scalp, precancerous lesions, and all open wounds on the hands.
- D. The clinical laboratory examination will include. In addition to a complete blood count. an erythrocyte sedimentation rate, and X-ray of the chest, and a complete urinalysis. Beta counts will be made on the urine when indicated, and if necessary, more extensive radiochemical analysis will be completed. The X-ray of the chest is considered important for future reference, and will be made on full-sized film and filed in the "special medical record."
- E. These examinations must be completed before personnel will be given medical clearance to engage in the Bikini Scientific Resurvey.

# IV. PERSONNEL FOLLOW-UP EXAMINATIONS

- A. All personnel will be given a follow-up medical examination upon completion of the Bikini Scientific Resurvey, even though it is unlikely that any evidence of overexposure will be encountered if safety regulations are followed.
- B. Particular attention will be given to the hands for any signs of tadiation effects, such as reddening of the skin around the nails or

changes in the fingerprints. These observations will be used as a screening method to select those who should be referred to a Medical Advisory Board for more careful evaluation.

- C. The unite will be carefully studied in case of accidental overexposure to radiation or radioactive materials. Beta counts will be made, and if twice background or higher is found in any urine sample, more extensive radiological tests will be carried out.
- D. The follow-up examination will include complete blood counts, and an erythrocyte sedimentation rate. All blood samples should be obtained under similar technique, and at the same time of day for each individual. Since a variety of changes is possible in the blood picture after exposure to radiation, all blood counts will require interpretation by a medical officer trained in the special problems of hematology in radiation sickness. In cases suspected of overexposure, or when unexplained laboratory findings occur, total erythrocyte and leucocyte counts will be made, and urine beta counts repeated. (ndividuals presenting these findings, and individuals known to have received overexposure to external radiation, as shown by photographic dosimetry, will be eliminated from further possible exposure pending the outcome of these studies.
- V. PERSONNEL PROTECTION
  - A. General Information
    - All personnel will be issued protective clothing consisting of caps, green work pants and shirts, canvas gloves, and work shoes.
    - This uniform will be worn by all personnel working at tasks or in areas considered dangerously radiologically contaminated.
    - 3. The wearing of protective clothing and the use of other designated protective measures must be rigidly followed until the radiological situation has been evaluated by the Radiological Safety and Realth Sections.
    - Navy Gas Masks with B-2 canisters will be made available for use in situations where tadioactive dust is found present in hazard ous amounts.
    - The Radiological Health Officer will make recommendations as to changes in safety regulations as the situation may require.
  - B. Beach Working Parties
    - Initial beach working parties will be accompanied or preceded by a Radiological Safety Officer, and all members of each party will wear the prescribed protective clothing.
    - The Radiological Safety Officer will determine if any contamination exists, and will collect suitable samples of materials for laboratory examination aboard ship.
    - Great care shall be taken to avoid eating or eating with, drinking or drinking with, any materials found on the islands until radiological clearance has been given. In most cases this

clearance will require shipboard laboratory tests of the materials in question. (There shall be no swimming in lagoon waters until clearance has been given by the Radiological Health Officer.)

- C. Scientific Expeditions to Beaches and Reefs
  - A Radiological Safety Officer will accompany all initial expeditions to reefs and beaches.
  - All protective measures will be executed until the radiological situation has been fully determined and clearance given by Radiological Health Officer.
  - 3. Care must be exercised to avoid cuts and scratches from sharp cotal, as open wounds are extremely bazardous when bandling materials contaminated with radioactive fission products and unfissioned materials. If any such wounds occur accidentally, the Radiological Health Officer will be notified immediately.
- D. Camps Ashore
  - All new camp sites and existing camps, buildings, and other materials, which may be utilized as a shore-based camp for living purposes, will be checked by monitors before use, and laboratory analyses of samples will be made, when and if indicated.
  - Particular attention will be given to drinking water in tanks and service pipes. Water analysis will be made before such facilities are rehabilitated for use.
  - Atl gear that is found on Bikini island associated with the prep aration of, and handling of food and drink, must be thoroughly scrubbed clean, and radiologically cleared before being returned to such service.
  - Rusty or corroded materials must not be allowed to come in contact with food or drink.
- 5. The north end of Bikini Island was the most heavily contaminated, and special precautions must be taken if camp sites are required in this area. Under no circumstances will marine life of any type (found within or about the atol) be eaten, unless prior radiological health clearance has been given.
- Diving Operations
  - The deep water diving operations for the inspection of the suaken target ships probably will constitute the greatest radiological hazard to Resurvey personnel. Most of these operations will be within or about the roral crater formed by the underwater blast. The coral and sediment, as well as the ships in this sector, were highly radioactive following Test B of last year. Allowing for natural decay, there still will be considerable radiation present, together with hazardous quantities of Fissioned and unfissioned material.
  - All protective measures will be adhered to by personnel engaged and assisting in those operations.

- Radiological Safety Officers will determine the extent of the radiation, and safe working period with deep-water survey probes. at the site and prior to the diver's descent.
- 4. All diving clothing, gear, and associated equipment that has been submerged will be washed off with a stream of water as it is bolsted, carefully monitored, and further decontaminated if necessary.
- 5. Divers will be monitored, and will proceed through the "change station." if necessary, for decontamination prior to being remonitored. If any part of the body exceeds twice background count, showering or scrubbing with soap and water must be repeated until this level has been attained.
- All personnel handling diving gear and associated equipment that comes in contact with radioactive materials will be processed in the same manner as divers.
- 7. While it is anticipated that radiological hazards in connection with shallow-water diving along atoll reefs will be minor, all diving areas will be initially checked by ponitors with underwater probes, and laboratory samples will be taken for analysis if necessary. Based upon the monitoring reports and laboratory findings, and Radiological Health Officer will determine the protective measures necessary.

#### VI. PROTECTIVE PROCEDURES AND EQUIPMENT

- A. Monitoring Instruments
  - For general field and personnel monitoring, the type 263 Geiger tube survey meter will be used. This instrument can detect both beta and gamma radiation in a range from less than 0.001 R/24 hr. In addition, by use of earphones, background counts can be determined.
  - For alpha detection in the field, the portable "Zeuto" nylon window ionization chamber will be used. Since this instrument requires the presence of considerable alpha activity in order to respond. A negative indication does not signify complete absence of alpha emitters. Laboratory analysis of suspected samples will be required.
  - 3. For gamma radiation measurements in the vicinity of sucken ships and bomb crater coral, the Type 235 survey meter with an ionization chamber in an extended probe will be used. This instrument has a gamma range of from 0.001 R/24 ht to 0.6 R/24 hr. but will not detect the presence of alpha or beta radiation.
  - 4. For supplementing film badges, the pentil type quartz fiber dosimeter will be used. This pocket type instrument depends upon the ionizing discharge of gamma radiation. It has a range from 0 to 2.0 R. Pencil dosimeters will be worn by all deep-water divers and by others as conditions indicate.

- B. Photographic Dosimetry
  - J. A photographic dosimetry unit will be set up to issue, receive, and process film badges. The Radiological Health Officer will have cognizance of this unit. The Type K film badges used will totalize the amount of general body radiation received. They have a gamma range from 0 to 2.0 R.
  - Film badges will be worn by all deep-water divers. and all others contacting significant radiation. and will be processed daily for divers, and for others at intervals dictated by the radiation contacted.
  - Complete records will be kept of name, badge numbers, date, and hours of exposure. The exposure will be totalized for each individual concerned, and entered into the total dosage record for the operation.
  - 4. As a general rule, an individual will be permitted to reengage in the same operation the following day only if the tolerance limit of total body radiation of 0.1 R per day has not been exceeded.
- C. Decontamination "Change Stations"
  - Personne) decontamination of "change stations" will be established aboard <u>Chilton</u> (APA-38). <u>Coucel</u> (ASR-8). and on LCI(L)-615. if necessary.
  - All personnel returning to these ships who have been engaged in operations resulting in contamination to clothing or body will proceed through the "change station."
  - A special compartment will be provided for the removal of contaminated clothing: handwashing facilities. including brushes for scrubbing the nails, will be provided separate from the showers.
  - 4. After gross dirt and contamination are removed from the hands by repeated scrubbing with soap and water, personnel will proceed to the shower and wash the body, repeatedly soaping and rinsing. They will then dry themselves in the shower room and reenter the noncontaminated dressing room, where they will be completely monitored, with special attention being given to the hair, hands, and feet. A Type 263 survey meter with earphones shall be used for personnel monitoring.
  - If any part of the body reads above twice background count, a second scrubbing and shower must be taken, and the decontamination process repeated until this level is attained, prior to donning clean clothing.
  - 6. Contaminated clothing will be laundered in a special-purpose laundry, which will be used exclusively for such purposes. The wastewater from the portable laundry equipment will be pumped over the side and not connected to the ship's sanitary system. Monitors will inspect the laundry equipment from time to time to make sure that it is not accumulating any contamination. Clothing

that exceeds twice background gamma plus beta after repeated laundering will be discarded and disposed of in a safe manner.

- Radiological Sample Handling and Storage.
  - Care will be exercised in handling and storing radioactive samples to prevent the spilling and spreading of contaminated material about the ship.
  - All samples must be placed in covered bottles or jars wherever practicable before being brought aboard ship and well-packaged or placed in leakproof containers in such a manner that no wet or dry material can escape.
  - Special storage spaces will be designated and properly marked for the storage of "hot" samples. These spaces shall be so located that no personnel can receive more than 0.1 R/24 hours radiation from them.
  - Shelves in sample rooms shall be lined with paper or other suitable disposable material to protect against or pick up any accidental spills.
  - Scientific laboratory work tables used for contaminated material likewise shall be covered with disposable paper to prevent the accisulation of radioactive materials. This is important both as a health measure and as an aid in keeping laboratory background counts low.
  - 6. Suitable, well-marked disposal cans shall be provided in sample sorting rooms and technical laboratories for the disposal of discarded radioactive specimens and wastes. No radioactive wastes will be discarded in the ship's sanitary system. Since radio activity will accumulate and may later present a difficult decontamination problem.
- Monitors will be assigned to make periodic inspections of sample rooms and technical laboratories.

#### Appendix II

## Radiological Safety Plan

#### I. ORGANIZATION

Chief of Section and Radiological Safety Officers. The Radiological Safety Section will be based aboard USS <u>Chiiton</u> (APA-38).

#### II. GENERAL INFORMATION

Appendix I to this Annex contains general information relative to the radiological situation expected to be encountered by personnel engaged in the operations to be undertaken by the Bikini Scientific Resurvey.

#### III. MISSION

To determine the magnitude of the radiological hazards existing within the operational area, and to furnish the Radiological Health Officer with such data and reports as may be required to permit an accurate evaluation of the radiological situation, and the formulation of policies and procedures necessary for the protection of personnel engaged in the operation.

#### IV. TASKS

- Monitoring Operations
  - 1. Preliminary Survey of Sikini Island

Radiological Safety Officers will accompany the initial parties ashore on Bikini Island, and will begin a preliminary radiological survey thereoi. This preliminary survey will be completed as soon as practicable, and particular emphasis will be placed upon the monitoring of all existent buildings or structures on the island.

- Diving Operations
  - Deep Water

Two (2) Radiological Safety Officers will be aboard <u>USS</u> <u>Coucal</u> (ASR-8) during all deep water diving operations conducted from that vesse). One (1) Radiological Safety Officer will operate the deep-water probe during such operations, and one (1) Radiological Safety Officer will be responsible for the monitoring of all divers returning aboard Coucal, together with the monitoring of all samples brought to the surface by the divers.

Detailed instructions as to precautionary measures to be taken in connection with deep-water diving are contained in paragraph V.(E) pf Appendix 1 to this Annex.

Core Sampling

One (1) Radiological Safety Officer will be aboard LUI(L)-615 during all core sampling operations conducted from that ship. The Radiological Safety Officer will be responsible for the monitoring of all samples and personnel engaged in the work on the vessel.

4. Accompaniment of Beach and Boat Parties

Radiological Safety Officers will accompany all beach and boat parties working with)n the operational area until such time as specific localities have been determined to be free from radiation hazards and properly cleared by the Radiological Health Officer.

Periodic Inspections

Radiological Safety Officers will periodically check various parts of the ships for radioactivity. Such checks will include condensers. evaporators, fire mains, flushing systems, etc. where there may be a concentration of deposition of radioactive materials from contaminated water.

Special Radiological Reconnaissance

Special radiological reconnaissance. not essential to safety. may be conducted by the Radiological Safety Section when safety requirements are not overriding.

#### V. PROTECTION OF PERSONNEL

A, Film Badges

Radiological Safety Officers will issue film badges daily to individuals entering hazardous areas, and will collect these badges at the end of each day for delivery to the Photographic Dosimetry Unit. This procedure will be followed until such time as radiological reconnaissance indicates that it may be modified in specific instances. All exceptions to this procedure will be cleared and announced by the Radiological Health Officer.

- B. Protective Clothing
  - General

Radiological Safety Officers will insure that members of all scientific work parties are equipped with the following items of protective clothing:

> Cap, "bosebail type" Shirt, working, green twill Trousers, working, green twill Shoes, field Gloves, canvas (Will be issued Whenever tadiological conditions warrant).

C. Clothing for Divers

Personnel engaged in shallow-diving operations in areas presenting a radiological hazard will be provided with the following items of protective equipment in addition to their normal diving gear:

Gloves, canvas

Coverails.

- D. Decontamination
  - Decontamination, or "change stations." will be established aboard Chilton, Coucal, and LC1(L) 615. if required.
  - Radiological Safety Officers will monitor all personnel upon the completion of personnel decontamination procedures, and each individual will be responsible for reporting to the Radiological Safety Officer in attendance for such monitoring prior to donning his clean clothing.

- Detailed instructions as to the decontamination procedures to be followed is contained in paragraph VI.(C) of Appendix i to this Annex.
- E. Technical Reports and Data
  - The Radiological Safety Section will receive and maintain files of schitoring reports compiled during the operation, will maintain the "radiological situation map." and will compile such additional data as may be required by the Project Officer. Bikini Scientific Resurvey.
  - The Radiological Safery Officer will cooperate with the Radiological Health Officer, and will submit all data pertaining to the existent radiological situation to him for review and evaluation.

# BIKINE SCIENTIFIC RESURVEY USS CHILION (APA-38) C/o F.P.O., San Francisco, California

16 July [1947]

MEMORANDUM :

- From: Radiological Safety Officer To: Project Officer
- Subj: Radiological Reconnaissance of Bikini Island and Prayer (Eneman) Island

1. In compliance with instructions contained in Project Officer Memorandum No. 3-47, dated 14 July 1947, the Radiological Safety Officer, together with three officer monitors, accompanied the Project Officer and Technical Director ashore in the advance landing party at approximately 1200 hours. 15 July 1947, for the purpose of making a radiological survey of those areas of Bikini Island that may be occupied during the initial phases of the Resurvey Operation.

2. Since a preliminary survey of the beach in the vicinity of the initial landing site northwest of Beacon D (indicated that existent radiation intensities were of the order of 0.004 R/24 hours and well below the established toletance, four additional monitors were brought ashore, and a general survey of the northwestern tip (map reference 2406) and central sector (map reference 2605, 2606, 2704, 2706) of Bikini (sland were initiated.

3. Shortly after the initial landing on Bikini, the Technical Director and one officer monitor reembacked and proceeded to Prayer Island (map reference 6690) to make a radiological reconnaissance of that area.

4. The general reconnaissance referred to in paragraph 2 above indicated that all of the low-intensity radiation encountered on the central sector of Bikini was confined to the said beaches along the lagoon side of the island and to debris (life rafts, fenders, lines, etc.) that had washed up on the beach. The survey of the northwestern tip of Bikini indicated intensities of approximately 0.03 R/24 hours in algal beds and other scattered localities throughout that sector. Throughout the remainder of the surveyed areas, only background counts were observed.

 Observed intensities on Prayer Island were not above background, except for scattered pieces of debris, which produced readings somewhat above background count.

6. Representative samples of sand, soil, or coral were taken from each sector of the islands surveyed, and have been turned over to the laboratory for analysis and evaluation.

### REPORT OF FINDINGS

### MEDICAL LEGAL BOARD, BIKENE SCIENTIFIC RESURVEY

#### A. Statement of the General Radiological Situation

1. The radiological survey of Bikini Atoll conducted by personnel of the Radiological Safety Section during the period 15 July 1947 through 26 August 1947 indicated that while certain isolated areas and accumulations of debris washed ashore on the lagoon beaches continued to produce beta and gamma radiation in excess of the tolerance of 0.1 coentgen per 24 hours, as outlined in Paragraph 8(f) of letter. Bureau of Medicine and Surgery, Navy Department. EN10/Radsafe P2-4, dated 31 January 1947, the residual beta and gamma radiation present throughout the the land, beach, and exposed reef areas of the atoll was wel! within this same tolerance itmit.

2. The maximum activity observed by radiological safety officers during the course of this survey was obtained on a deposit of tarry material on a ledge of rock located on the sand spit extending west of Bikini Island. This localized area produced a beta plus gamma reading of 0.6 roentgens per 24 hours, and a gamma reading of 0.18 roentgens per 24 hours.

### Summary of Radiological Safety and Health Precautions.

 The radiological safety and health precautions prescribed in the Radiological Safety and Health Annex to the Resurvey Operation Plan were observed throughout the course of the operation.

2. Radiological safety officers accompanied all scientific work parties during the initial landings on islands or areas within the lagoon, and continued to accompany these groups until such time as it had been determined that the area in question was free from any hazardous concentrations of radioactive materials. These officers were equipped with Model 263 Survey Meters, manufactured by the Victoreen Instrument Company, and carried pocket electroscopes or dosimeters to record the accumulative external radiation to which the group was being exposed.

3. Each deep-sea diver returning aboard USS COUCAL (ASR-8) was thoroughly bosed down with a stream of saitwater while still on the stage and prior to being taken aboard to insure that all radioactive materials adhering to his suit and associated gear were washed off. Following the removal of his diving suit, each diver and his gear was monitored with a Model 263 Survey Meter by one of the two radiological safety officers stationed aboard this ship to detect the presence of any beta or gamma radiation on either his person or his equipment. Personnel monitoring was carried out aboard USS CHILTON (APA-38) until such time as it had been determined that this procedure was no longer required. Personnel decontamination or "change" stations were established in both COUCAL and CHILTON for the use of personnel in the event that monitoring indicated the presence of excessive radiation on either their persons or their clothing. 4. All members of scientific work parties wore individual film badges during the initial stages of the operation and until such time as it had been determined that this procedure could be modified, or dispensed with entirely in the instance of areas that had been radiologically cleated. In view of the fact that the deep-sea diving and underwater inspection operations conducted on the sunken ships within the target area were considered to be the most hazardous from the standpoint of exposure to radiation. film badges and pocket desimeters were carried by each diver throughout the course of this work. Three film badges, each enclosed in a waterproof tubber coveting, were attached to the inner clothing of each diver prior to his descent to the bottom; one at chest height, one at waist height, and one in his shoe. These film badges were delivered to the Photodosimetry Unit for developing and analysis at the conclusion of each dive during the early phases of the work. And later at weekly intervals when it had been determined that hazardous concentrations of radioactive materials were not being encountered.

5. Of the total of 517 film badges processed by the Photodosimetry Unit of the Radiological Health Section, no badge carried during the course of the resurvey operations gave evidence of exposure to beta or gamma radiation in excess of the tolerance limits referred to in Paragraph A.1 above.

#### C. Summary of Chemical and Biological Studies

i. Biological studies and investigations carried out during the course of the resurvey operations indicated the presence of varying amounts of radioactivity in the marine tife of Bikini Lagoon, though not in sufficient concentrations to afford an external radiation hazard. Instructions issued by the Task Group Commander, upon the recommendation of the Radiological Health Advisory Board, directed that no marine life whatsoever would be eaten by personnel attached to the expedition.

2. Recreational swimming at certain designated beach areas on Bikini Island was permitted only after a chemical analysis of the lagoon water indicated a plutonium content of less than  $10^{-11}$  grams per liter of water. A gross analysis of the fission products present in the water indicated a content of less than  $10^{-12}$  curies per liter of water.

3. On the basis of the radiochemical analysis of edible fruits taken from Bikini Island, the original ban against the eating of such fruits obtained on Bikini Island was lifted on 24 July 1947 by the Task Group Commander upon the recommendation of the Radiological Health Advisory Board.

#### Statement of Findings of the Board

). In view of the data obtained and the observations made during the period 15 July 1947 through 26 August 1947, the undersigned members of the Medical Legal Board. Bikini Scientific Resurvey, attest, that to the best of their knowledge and belief, no individual assigned to, attached to, or participating in the Bikini Scientific Resurvey operations during this same period of time was exposed to radiation in excess of the established standards.

### APPENDIX C

## INSTRUMENTATION OLVESION PROJECTS

### APPENDIX C

## Instrumentation Division Projects

PROJECT	Ţ <u>IT</u> LĘ	ÇROUP
II - <b>I</b>	Air Dropped Condensor Blast Gauges	013H
11 - 2	Linear and Logarithmic Time Axis	013G
	(Pressure Recorders)	
II 3	Air Blast Aluminum Foll Meters	013G
II - <b>4</b>	Air Blast Ball Crusher Gauges	013G
11 - 5	Air Blast Free Piston Gauges	013G
11 6	Pyramidal Orientometets	0.) 3C
11 - 7	Underwater Pressure - Crusber Gauges.	0136
	Dlaphragm Gauges	
11 - 8	Underwater Pressures - Piston Gauges	013G
9 - 11	Shock Wave Velocity - Chronographic and	0136
	Blast Switches	
II - 10	Shock Wave Velocity - Argon Flash Units (Test A)	0136
11 - 13	Sbock Wave Velocity - Eastman Cameras	0136
II - <b>12</b>	Fire Ball Growth - O'Brien Cametas (Test A)	013G
11 - 13	Reasurement of Blast Wave Velocity in air and	<b>GE10</b>
	water using Sonobuoys	
11 - 14	Hydrophones - Low Frequency	0130
II - 15	Strain and Displacement Gauges	013C
11 - 15 (a)	Long Base Displacement Gauges	013C
11 - 12 (9)	Lead Strip Gauges	013C
II - 15 (c)	Seismic Displacement Gauges	013C

II - 15 (d)	Multi-Frequency Gauges	013C
<b>11 - 16</b>	Underwater Pressure Gauges	0130
11 - 16 (a)	Diaphragm Pressure and Tourmaline Crystal Gauge	013C
(d) 61 - 11	DeJuhasz Gauge (underwater)	013C
II - 16 (c)	Tourmaline P.E. Gauges (Telemetrical)	0130
(b) <i>61</i> - 11	Ball Crusher Gauges	0130
II - 16 (e)	Mođugno Gauges	0130
11 - 17	Blast Pressures - Diaphragm Gauges	013C
⊾I - ]7 (a)	Diaphragm Blast Gauges, <b>TMB</b>	013C
II - 17 (b)	Statham Blast Gauges	0130
11 - 17 (c)	DeJuhasz Pressure Time Cauge	0130
II - 18	Velocity Gauges	013C
II - 18 (a)	Velocity Meters. Wire Recorders.	013C
	Acetate Film Recorders	
II - 18 (b)	Impulse Velocity Gauges	013C
II - 19	Accelerometers	0130
(a) 91 - 11	Mass Plug Accelerometer	0130
II - 19 (b)	Putty Gauges	013C
11 - 19 (c)	Indonter Accelerometer	013C
[] - 19.1	Bodily Motion Gauges	013C
11 - 19.1 (a)	Pailograph	013C
II - 19.1 (b)	Jacklin Accelerometer	013C
II - 19.1 (c)	Shock Displacement	013C
11 - 19.1 (d)	Long Base Strain Gauges. Peak Recording	013C
	and Time Recording	
JI - 20	Boll and Pitch Recorders	913C

II - 21	Magnetogaeters	013C
11 - 22	Ship Temperature Measurements	013C
11 - 23 (a)	Maximum Pressure in Target Ships	013C
11 - 23 (b)	Pressure - time recorders	013C
11 - 24	Blast Pressures: Cons. Drums. Pipe Gauges	01382
11 - 25	VGTA Recorders in Navy F6F Drones	Task Unit
		1.6.14
II - 26. II 27	Effect of Blast on Flight of B-17 Drones	T.G. 1.5
	and B-29, F-13 Aircraft	
II - 28	inductiphones, Kwajalein, Washington, D.C.	013G
II - 29	Shock Wave Velocity Reflecting Mirrors	013C
	(Test A)	
111 - J	Echo Sounders (portable)	013B
<b>III</b> - 2	Echo Sounder (ships)	0138
f11 - 3	Echo Sounders (buoy mounted portable)	0138
111 - 4	Bottom Pressure Recorders (Hand Started)	0138
111 - 5	Bottom PressureRecorders (Blast Started)	013B
111 - 6	Water Height Indicators	013 <b>B</b>
III - 7 <b>6 8</b>	Television Cameras and Transmitters	0138
III - 10 & IR	Cameras on Eneu, Bikini, and Romen Islands	013 <b>B</b>
	(III-)0), Cameras on Alicraft (III-11)	
III - 12	Sono Wave Buoys	013B
III - 13	Bottom Pressures (Shore Connected Inducti-	
	phones). Nam and Irolj	
III - 1 <b>4</b>	Bottom Pressures (Shore Connected	013B
	Inductiphones) Eniwetok. Kwajaelin,	
	Wotho, and Rongelap	

IEI - 15	Surveys from U.S.S. Bowditch	013B
11 - 16	Seismology	013B
(11 - 16 (a)	Seismographic Measurements during Test B	0138
III - 16 (b)	Induct iphones	0138
111 - 17	Water Temperature Recorders	0138
111 - 18	Wind Recorders	0138
111 - 19	Gamma Ray Cavity Moters	0138
111 - 20	Oceanography in Support of Radiological Safety	DIJB
IV - 2	Effects of Explosion on Transmission and Reflection	0130
	of Electromagnetic Waves	
τν - 3	YR Radio Beacon and AN/CPN-6 Rada: Beacon, Enldrik	013D
	Island (ECO EX-42.49) (Test A only)	
4 VI	Observation of Radio and Radar Transmission from	013D
	Target Vessels (ECO EX-7) (Test A)	
(V - 5 (a)	Bikini Television Installation (ETO EX-19A)	0130
(V - 5 (b)	Airborne Television Installations (ECO EX-)9B)	013 <b>0</b>
IV - 6	Long Range Acoustic Observation (ECO EX-62)	0130
	(Test & Only)	
tv 7	Investigation of Spherics Disturbances Generated	0130
	(ECO EX 63(1)).	
IV S	Telemetering of Geiger Counters and ion Chambers	0130
	(ECO EX 64)	
17 9	AAF Island Instruments	AAF Instru- mentation
IV - 10	AAF Orone Instruments	AAF Instru- mentation

14 - JI	AAF Instruments in Manned Planes	AAF Instru- mentation
IV - 12	Electronic Timing Signals	013H
IV - 13	Firing Signals (Test B)	013H
TV - 14	Long Range Monitoring of Transmission from	013b
	Target Vessels. (ECO EX-11)	
IV - 15	Detection of Radak Reflections from Ionized	Q1 3D
	Column at a distance 2500 miles, (ECO EX-18)	
IV - 16 (a)	Radar Observation of Ionized Column from Kwajalein	013D
	(Test A only)(ECO EX-5))	
IV - 16 (b)	Radar Observation of Ionized Column from Short	01 3D
	Distances (ECO EX-63(2))	
IV - 17	Operation of Remotely-Controlled Drone Boats to	013D
	Obtain Water Samples for Radiological Analysis	
	(ECO EX-65)	
IV - 18	Telemetering Air and Water Pressure (ECO EX-22)	0130
1V - 19	Infra-red Measurement (ECO EK-63(2))	013D
V - 1	Destroyer Manitors	013E
V 2	Seaplane Monitors	013E
V - 3	Poat Monitors	013E
V - 4	Boarding Parties	013E
V = 5	Fixed Base Monitors	013E
V 6	Gun Boats (PGMs)	0)3E
V - 1	Channels around Bikini	013E
V - 8	Airborne in Planes	3E 10
V - 9	Photometric Film Badges	013E

V - 10	Radiation Intensity by Sonne-Strip Cameras and	014M
	Lead Film Packs	
V - 11	Rediation Intensity vs. Time inside Target Ships	010H
V - 12	Camma Ray Intensimeters	013E
VC - 1	Spectography	0136
VI Z	Total Radiation, Photoelectric Units	0136
VI - 3	AAF Spectography	013K
<b>∀I ~ 4</b>	Total Radiation. Unfocused Thermocouples	0 3Ç
VI - 6	Focused Thermocouples	0136
VII - 1	Gamma Ray Timing (Test B only)	013H
VII - 2	Fast Neutron Density (Test A only)	013H
VII - 3	Radiochemistry	013H
V(1 3	Radiochemistry	013H
VIII - 1 thru		
V[11 - 4	Seismology	0133
VIII - 5 thru		
VIII - 8	Tide Measurements	<b>01</b> 3J
9 - 111V	Terrestrial Nagnetism	0133
VIII - 10	Atmospheric Conductivity	013J
VITE 11	Ionospheric Reflectivity	<b>0</b> 13j
V111 - 12	Jonization in Air	Q13J
V111 - 13	Microbatographs	0103
V111 - 14	Microbarometric Measurements	0133
VIII - 15	Sound Ranging	013J
VIII - 16	Electromagnetic Propagation	0133
VIII - 17	Geiger Counter Observations	Q13J

VIII - 1 <b>8</b>	Radiosonde Carrying Geiger Counters	0135
<b>1X</b> - 1	Fastax cameras. Island Photography	0]3K
IX - 2	Island Photography	013K
1K - 3	Island Photography	013K
IX - 4	Island Photography	013K
11, 5	Island Photography	013K
1X - 9	Island Photography	013K
18 - 7	Island Photography	013K
1X · B	Island Photography	013K
IX - 9	Army Air Force Photography - C-54 Installations	013K
IX - 10	Army Air Force Photograph - F-13 Installations	01 <b>3K</b>
1 <b>x</b> - 11	Navy Aerial Photography	013K
IX - 12	Navy Aerial Photography	013K
IX - 13	Navy Merial Photography	013K
1% - 14	Navy Aerial Photography	013K
IX - 15	Target Vessel Cameras	01 3K
1 <b>x -</b> 16	High Speed Eastman Cameras	013K
IX - 17	Icaroscopes	013K
1X - JB	Drum Spectograph	013X
IX - J9	Bowen High Speed Camera	013C

APPENDIX D

BIKINE AFOLE ESLAND SYNONYMS

### APPENOIX D

### ISLAND SYNONYMS

### BIKINI ATOLU

<u>Underscored</u> entries are the names of the islands as used in this report. Island names enclosed in quotation marks were used by Joint Task Force 1 for the islands of Bikini. CAPITALIZED entries are the code names used by later joint task forces. All other entries are spellings of the islands that may appear in other literature.

ABLE	<u>Bokbata</u> Bokobyaada - "Boby"
Adrikan	YOKE - Arriikan ··· "Aran"
Aerokoj	OBOE AITUKII)] - "Arji"
	PETER - Airukiraru - "Airy"
<u>Actokojioi</u> Aitukiiji	
-	OBOE - <u>Aerokoj</u> - "Arji"
Airukiraru	PETER - <u>Aerokojioi</u> - "Airy" PETER - Aer <u>okojioi</u> - Airukiraru
"Alry"	PETER - APTOKOJIOI - AJTUKITATU
ALFA	Bokaetoktok - Bokoaetokutoku "Boku"
"Amen"	GEORGE - <u>Aomen</u> - Aosoen
<u>Aonen</u>	GEORGE - Aomoen - "Amen"
Across	GEORGS - Aomen Amon
"Aran"	YOKE - Adr <u>ikan</u> - Arriikan
"Arjl"	OBOE - <u>Aerokoj</u> - Airukliji
Arriikan	YOKE - <u>Adrikan</u> - "Bran"
BAKER	Bok <u>onejien</u> - "Bone"
Bigiren	ROGER - <u>Bikdrin</u> - "Biten"
<u>Bikdrin</u>	ROGER - Bigiren - "Biren"
Bikini	HOW
"Biren"	ROGER - Bikdrin - Bigiren
"Boby"	ABLE - Bokbata Bokobyaada
Bokaetoktok	ALFA - Bokoaetokutoku - "Boku"
Bokbaca	ABLE - Bokobyaada - "Boby"
Bokdrolul	SRAVO - Bokororyuru - "Boro"
Bokoaetokutoku	ALFA - Bokaetoktok - "Boku"
Bokobyaada	ABLE - Bokbata - "Boby"
Bokone jien	BAXER - "Bone"
Bokonfuaaku	ITEM - "Bokon"
Bokororyuru	BRAVO - <u>Bokdrolul</u> - "Boro"
"Boku"	ALFA - Bokaetoktok - Bokoaetokutoku
"Bokon"	ITEM - Bokonfuaaku
"Bone"	BAKER - Bokonejien
"Boto"	BRAVO <u>Bokdrolul</u> - Bokororyuru
BRAVO	<u>Bokdrolul</u> - Bokororyuru - "Boro"
CHARLIE	Nал - Мањи
"Cherry"	WILLIAM Jelete - Chieerete
Chieerete	WILLIAM - Jelete - "Cherry"
Coca	(Bikini Atol)

00G	l <u>ioi1</u> - Yarochi - "Yaro"
<u>Kneman</u> En <u>eve</u> tak E <u>nialco</u> Enidrik Enitrikku Eningan	Dorikku <u>Odrik</u> "Uku" Pa <u>rry</u> - Medren (Enewetek Atoll) TARE - <u>Eneman</u> - Eninman - "Prayer" KINC <u>Eninman</u> - TEman" - "Prayer" NAN - Enyu PRED - Eniwetok (Enewetak Atoll) KING - "Enar" UNCLE Eniltikku - "Erik" UNCLE Eniltikku - "Erik" TARE - <u>Eneman</u> - "Eman" - "Prayer" FRED - <u>Enewetak</u> (Enewetak Atoll) UNCLE - <u>Enidrik</u> - Eniltikku NAN - En <u>eu</u>
FOX	Lo <u>mili</u> k - Romerikku - "Romuk"
FRED	En <u>ewetak</u> Eniwetok (Enowetak Atoli)
George	Romen – Aomoen – Amen"
ном	Bikini
"lon"	MIKE - <u>Ionchebi</u>
<u>lonchebi</u>	MIKE - "Ion"
<u>lrojj</u>	DOG - Yurochi - "Yuro"
lTEM	<u>Boko</u> nfua <u>aku</u> - "Bokon"
Jelete	WILLIAM - Chieerete - "Cherry"
JtG	<u>Yomyaran</u> - "Yoran"
KING	Em <u>lair</u> o - "Enar"
Le <u>le</u>	SUCAR - Reere - "Reer"
Lomilix	FCX - Romurikku - "Romuk"
LOVE	Ro <u>chikarai - "Rokar"</u>
Luxoj	VICTOR Rukoji - "Ruji"
Medren	ELMER - Party (Bnewetak Atoll)
Hike	Io <u>ncheb</u> l - "Ion"
<u>Nam</u>	CHARLIE - Namu
Namu	Charlie <u>Nam</u>
NAN	<u>En</u> eu - Enyu
OBOE	<u>Aerokoj</u> Airakiiji "Arji"
Od <u>rik</u>	EASY Uorikka "Uku"
Oroken	ZEBRA Durukaen "Oruk"
"Orok"	ZEBRA <u>Oroken</u> Ourukaen
Durukaen	ZEBRA <u>Oroken</u>

. . . .

<u>Parcy</u> PETER "Prayet"	ELMER - Medren (Enewelak Atoll) A <u>erokojlol - Alcukiraru - "Alry"</u> TARE <u>Smeman</u> Enimman "Eman"
ROGER "Rokar" "Romuk" Romurikku Rukoji "Ruji"	BUGAR L <u>ele</u> - Reere SUGAR - <u>Lele</u> - "Reer" LOVE "Rokar" Hikd <u>rim</u> Higiren - "Biren" LOVE - Rochikarai FOX <u>Lomilik</u> Romurikku FOX - Lomilik - "Romuk" VICTOR L <u>ukoj</u> - "Ruji" VICTOR <u>Lukoj</u> - Rukoji Le <u>le</u> - Reere - "Reec"
TARE	<u> Bnegan</u> - Eningan - "Eman" - "Prayer"
UNCLE "Uka" Uorikku	<u>Baldrik</u> - Eqilrikku - "Erik" RASY - O <u>drik</u> – Dorikku EASY - <u>Odrik</u> - "Oku"
VICTOR	Lu <u>koj</u> - Rukoji "Ruji"
WILLIAM	<u>Bele</u> te Chleerete - "Cherry"
YOKE <u>Yomyatan</u> "Yotan" "Yuto" Yutochi	A <u>drikan</u> - Artiikan - "Araa" JIG - "Yomyaran DOG - <u>Iroii</u> - Yurochi DOG - <u>Iroii</u> - Yuro"
ZEBRA	Qroken - Ourokaen - "Oruk"

#### APPENO1X [

#### GLOSSARY OF TERMS

Many of the definitions in this glossary relating to nucleat device and radiation phenomena have been quoted or extracted from <u>The Effects of Nuclear</u> Weapons (3rd edition). S. Glasstone and P.J. Dolan. 1977.

acceletopeters in instrument for determining the acceletopetics of the system with which it naves.

Activation products. Radioactive nuclides produced by the incodeation of a stable nuclide, usually with neutrons.

AD. Destroyer tender (Novy).

- AEC. Atomic Energy Commission, Mushington, D.C. Independent agency of the reducial government with statistic responsibilities for atomic energy matters, no longer crists, its junctions have been assumed by the Repartment of Energy and the Nuclear Regulatory Commission.
- AL. Store ship (Many), also but Force.
- Arong. Armed Forces Special Weepons Project.
- 86. Atsocilandous auxiliary ship (Kavy).
- KC. Apphibious force isagship (Gavy).
- ACS. Serveying ship (Navy).
- AH. Hospital Ship (Navy).
- algebrasis. The desphasion of a miclear device in the about a serigist such that the expanding fituda() does not couch the Easth's surface when the Luminosity Lemission of light) is at a maximum.
- a); particle (rejectory, the velocity and tore of descent of windblow, radioactive particles.
- AK. Cardo ship (Navy),
- AKA. "BELANK CAMPO Ship (Navy).
- AKS. Stores issue whip (Navy).
- altowable dosg. See MPL
- <u>alpha\_epitter</u> A radionuclide that undergoes transformation by alpha-pathicle emission.
- <u>alpha\_pacticle</u>. A charged particle chitted spontaneously from the nuclei of some (adjoactive)

elements it is identical with a believe nucleus, making a bass of 4 poilts and an electric charge of 2 positive units. See also reducativity.

- alpha tays. A Stemah of alpha particles. Locassy, a symmy for alpha particles.
- AMA: Army Map Service, Machington, G.C.
- Av Ner Taylog ship (Wavy).
- AQ. OHIPT (Kovy).
- ACC. Air Operations Center
- AGG. Gesoithe canker (Nawy).
- AP. Transport slipp (Navy).
- APA. AFLOCK CRONSPOLE (Novy)
- AFD high speed transport (Wavy).
- APD. Aberdren Proving Ground, Maryland,
- APH. Evacuation transport (Nevy).
- APp. Barcacks crate, nonself-propelled (Novy).
- APO Army Post Office.
- ARM. Sattle Cameria repole shty (Mavy).
- AND. Accelled ty Pleaning Styrksk (Novy).
- ARDC. Auxiliary floating drydock. concrete (Newy).
- BRG (General consultance optime report ship) (Navy).
- ARL. Landing coold repair ship (Nevy).
- scribing. The changing of a nuclear device from a Safe condition ithat is, a condition in which it cannot be detonated without intenti to a State of readion.s for detotation

ARG - Solvage ship (Slavy).

- ASSD. Selvage lifting ship (Nevy).
- MPS[T]: EalWage couff (module (Mnwy));
- ASR Submarine rescue ship (Navy).
- ASM ACTING MANAGEMENT AND MADE AND
- ATA AVALLARY pread tog (Navy).
- ATK Yleet ocean tug (Mevy).
- ATP: Restue one-ny tug (Mavy)
- Atoki, A this of cotal reals, nously with spain is etc. (b) courseness a impore most me house lated ments sisting from the deep provides have built up on subtriged volcances. They early can siderably to size it the largest atolf, wealsheld to the Marshall (scients, but no integuiar stage that excepts for 64 Miller (ist how, see also core) seet.
- atomic tomic ios weegen: A team wreathmars applied to a nurveat --aper attriving flastor envery thiy, see also flaston, supleat devide.
- etob): explosion. Gee conteer syptosion.
- Alternation. The process by which rediation is reduced to threeology when passing through some material. It is show to absorption we solution ing or both, but it excludes like decrease of locketing with distance from the source fits were square law, which see).
- RV. Seeplane tember (bavy)
- AVY. Stall semplate conder (Navy
- AMA: Algoraft rescue wessel (sony).
- Ang Disetting stby (Navy).
- 8 17. Moor angles, propeller driver Dumber developed by Moetry Marphane Company and wide y assist an World Mar 12. Used as radio controlled, unnambed drove cloud sampler in almospheric nuclear measure tests.
- 2.20. A 4 engine, proprint of delved tobac developed by Hobing, used for weather recordance searce, cloud tracking, endiating and photography, and active relating at the PPG. These versions designated RU-26. MR-29. and \$3-29.
- background\_sadjation. The redistion of ben 5 of unal environment, encoloring of that which comes then edshid rigs and from the natorially redisactive elements of the faith, including that from within man s budy. The term any elemmean radiation extraneous to an experiment.
- Dash Songe, the patt(nulpte dout cloud that calls out from the bottom of the cloud noises predoued by the desphasion of a surflear device hor underwheer bursts, the base surge is a cloud of water displets, and the flowing propenties are those of a homogeneous lightd.

DetDytherappinesky (P/T). A device for obtaining a technol of temperature with depin in the upper 3,000 tent (300 meters) of the preas from a write underway.

His Haraleship (Mary)

becapered (Boy). See corto (CS):

- Set& Burgs. Beta emitting particles that one into contact while the skin and constn for an appreciable time can cause a form of sadiation injury sometimes referred to an "neta burg." In an area of extensive early failed, the effore surface of the body may be reposed to beta particles.
- Seen unliker. A radionuclide that diwintegraph by Deca particle university. All terrators we elements with they is terrators expelled at the particles. Set. Glectronics, white exactly, required on the set of the set of inheles of inquired or repair on the set of
- Leta particle (cay). A changed particle of very small mass entried spontaneously from the enobel of certain radioansive elements. Most, if that sult of the direct finalmy products entries segurite twith particles inequitops). (Royal cally, the bein particle is identical to all objection saving as high velocity.
- Whangreter A device that measures bond yinid based on ibjic generated by the expression.
- Blass. The decomption of a macloss device. like the detonation of a high explosive such as TWT. retains 1. the sudden forsation of a pressure of shock mayes colled a blast maye in the air and a south maye aros. We endoug it imposhed to mated it forth.
- htest wave, an oil juliar propagated from at exphysical to which the pressure increases sharply at the itent and then decreases, inclusively which.
- plus, yield. That portion of the could energy of a inclear explosion that each entry itself as latest end size a waves
- colter compound. A shortcal in powder loca that is insected here belies water to decrease the togenitors of scale in Doller takes.
- tional medication. See weapon klearing,
- DRC Mail 1991 (A Performance Factor Accordence Epsyling Ground, Mary Jacki (Apply).

ware huren, of Arrichalsber, (Navy).

- WoRweeks. Runness of Yords and Denks (Newy).
- RyMed. Jusenu of Medicine and Surgery (Ravy).
- burst. Explosion: or descention. See also alrby 5; high <u>Al</u>titude burst, surface burst.
- BUSHING PUTTING OF SHIPS (NAVY)

- 2.46 A swin-regime stansport plane developed and monufactured for the Brey Als Forces by Castlos Wilchi Alreiaft Company.
- C.47. A twin engine transport structural manufactured by Deuglas Akritisti Cotsany (Astry Alr. Mostes version of the DC 1).
- Q-14. A 4 engine willtary cargo and personnel transport wapufactured by Boughes Alteriate Computy (Arey Alt Follow version of the 90.4)
- (3) Provy coulses (Newy).
- cable first shelter that covers a nuclear device being prepared for term. Hay be ideated on a cover, or the Farth's surface, or or a bange.
- called say tive A vacuum tube in which cathode rays intectrons) are boomed upon a fluorewhent server to produce a laminous image. The characted of this image is related to, and contobled by, the of sure elemental signals applied to the cathode-ray brast as imput in forwarion. The tubes are used is measuring takenus such ar oscilloscopes and in radar and television displays
- cave: A heavily satisfies enclosure in Marn radioactive surveying and the recordsy matter taked to sould radiation exposure of pressoned.
- ODC. Centers for interace control
- C. Antreviation for surfact which see . Cl. is preferred new but a way the abbreviation used in the (RVNs.
- CIC: Counter-Intelligence Corps (Asmy), Commun. Information Center (Savy).
- CONCRACT Commander in Casef, Pacific
- Clickle William Intrings, The closing of contain closures, decignated "Circle Wirlbah" fittings, hinders the weverent of substand air toto the toterios spaces of obtai onlys. This sealed state is also salled Clicke Wilstam Condition.
- DUTY 1. Crampieles, Johns Task Force 1.
- closed area. The Good areas of Hikini and Ecowetak and the wate: areas within 3 miles of these that the United States ployed to groutforized persons.
- cloud chamber effect See million risks
- plaud column (furme(). The visible column of weapon debries (and possibly dust or water drop lets) extending upward from the point of a musicar burs)
- cloud pressent on follows. Stellar), indigguilding cloud.
- CMD. Chief of Nevel Operations.
- colsizate To slige cuclear weapon radies; out puts within an essigned solid angle through

the use of Datiles in order to enhance measurements.

- Co Chevital symbol for cobail.
- cobait. Metailis element with radioisonope <sup>50</sup>Co used as a calibration source to: gamea instruments.
- ConchitReg. Commender Neval Air Force Pacific (Nevy).
- Conferences Constanting Service Forces Pacific (Navy).
- Condition Putpig". See Putple conditions.
- contentionation. The deposit of radioactive naterial on the surfaces of structures, aceas, objects, and personnel following a nuclear deto nation. This naterial generally consists of tailout in which fission products and other device debuis have became incorporated with particles of dust, vaporized components of device plastores, etc. Contamination can also acise from the radioactivity induced in sec taim substances by the action of remitted to sec taim substances by the action of remitted to action for capitotion. See also decosteding tion, failout. Weapon debuist.
- care) rent. A complex ecological association of bottom []unug and attacted theird marine and heat (ossile that form fringing rents, barder rents, and anglis. The lagrant of harder needs and atolis are important place. For the neposition of fine grated values rationate mad.
- CDN, or <u>open</u> Counts per minute. Is measure of redirective renerical distribution.
- the checkers were lot cession.
- CVS Chief of Staff -
- FTG, Cognarder, Task Group,
- cycle (C1) a unit of radioantivity: it is the activity of A quantity of any (udioactive spester to write T NOD = 10<sup>10</sup> (T7 palajor) and clear distangention, occur per second (apple) imately the radioactivity of i gram of radium). The gamen cuthe is substance defined correspondicity as the activity of naterial in which this number of games ray photons is writted per second. This unit is boing replaced by the Decquerel (BQ), which is equal to one distance gration jet second.
- (V. Alreraft carrier (Navy).
- CVE Record abrocaft carrier (Nevy).
- CML. Small Alereoft carebot (Roove
- Orday. The term used to devignate the unsubed day on which a test takes place. The equivatent tube applies to (reput (which see). The in plans is indicated by a letter which shows the unit of the employed in figures, with a

alous or plus sign to indicate the amount of time before or after the reference event. e.g., Ur/ means / days after 0 day. N/2 means 7 /mains after M-hour.

DD Destroyer (NAVy).

DCE. Escare destroyer (Nevy).

DE. OwEtsoyer escort (Navy).

debtis\_ired(pactive). See weapon\_debtis.

- decay (radioactive). The dectrose is activity of any radioactive material with the passage of time due to the sponteneous emission from the atomic model of either alpha or beta patticles, somethies accompanied by gamme radiation, or by gamma photons alone, every decay process has a definite half life.
- decostamination. The reduction or removal of consaminating radionative material from a structure, assa, object, or person. Decontamination may be accomplished by (3) treating the surface to remove or decrease the contamination; (2) letting the material sland so that the radioact()ulky is decreased as a result of nerural decay; and (3) covering the contamination; in order to attenuate the calibility emitted.
- device. Nuclear fission and fusion materials, together with their arming. fizing. firing, chemical-explosive, and effects-measuring components, that have not reached the development status of an operational Weapor.
- diagnostic measurements of experiments. Experiments whose purpose is to study the explosive disassenbly of a nuclear device as upposed to effects measurements (which see).
- 54 Wheleyes destroyes Okyvy: Conversed destroyers designed to conduct high-speed minelaying operations.
- <u>dose</u>. A general term denoting the quantity of ionizing radiation energy absorbed. The unit of absorbed dote is the safe (which see). In wort body tissue the absorbed dose in reds is ossentially equal to the exposure in coentgens. The biological dose (alled the RBS dose) in terms is a measure of biological effective yeak of the absorbed radiation. Dosage is used in older literature as well as exposure dose and simply exposure, and care should be exercised in their use. See side egopure.
- dose rate. As a general rule, the amount of ion line (or nuclear) tablation energy that an individual or material would receive per unit of time. It is usually expressed as rads (or rems) per hour or multiples or divisions of these units such as millireds per hour. The duse rate is commonly used to indicate the level of radioactivity in a radioactive area. See <u>Survey meter</u>.
- dosimeter. An instrument for measuring and registering the rotal accumulated dose of lot

exposure toi ionizing cadiation. Instruments worn or carried by individuals are called personnel dosimeters.

- Cosimetry. The measurement and recording of radiation doses and dose thres. It is conterned with the use of various types of radiation instruments with which pressurements are mode. See also dosimeter, survey meter.
- (2) Wr. Or dpm. Disintegrations per windle, a measure of radioactivity. Ilterally stown disintegrating per minute. Difficult to directly compare with coentgens per nout for unknown mixtures of fadionoclides.
- DTHB. David Teylor Model Besin, Cardenock, Karykond (Nevy).
- Distr. Decland-one-tolf-con amphibious truck. (Many).
- dynamic pressure. Air pressure that results from the mass siz fipe (or wind) penind the shock front of a blast wave.
- staggs measurements or experiments. Experiments: whose purpose is to soudy when a nuclear explosion does to material, equipment and systems. Includes also measurement of the changes in the environment caused by the detonation such as increased air pressures (blash), thermal and succease radiation, ceatering, water waves, etc.
- e)ectracagnetic sadiation. Electromagnetic radiations range from X-rays and gamma rays of short wavelength (high frequency). Chrough the ultraviolet, visible, and infrared regions, to radar and radio waves of relatively long wavelength.
- electron. A particle of very small mass and electrically charged. As usually defined, the electron's charge is negative. The term negation is also used for the negative electron and the positively charged turns is called a positron. See also beta particles.
- exposure. A measure expressed in roenrights of the ionization produced by gamma rays for K rays; in air. The exposure rate is the exposure per unit time (e.g., coentgens per hour). See dose dose rate, roentgen.
- 93905174 sate contours times joining points that have the same codiation intensity that define a failout pattern, represented in targe, of coentgens per hour.
- P-13. Photo version of B-29 powber.
- <u>F EP</u>. Single chains propelles driven fighter developed for the Navy by Scumman Alcoroft Company.
- falling. The process of phenomenon of the deviced to the Barth's surface of particles contast nated with radioscrive material from the radioactive cloud. The term is also applied in a

collective sense to the contaminated pattle date master itself. The marky (or ional failout is defined, somewhat arbitrathy, as particles reaching the Batth within 26 hours after a numbeau explosion. The detayed for worldwide) tailout consists of the souther particles which ascend into the upper tropp spiwere and attainablerw and are warried by winds to all patts of the Karth. The delayed islingt is brought to farth, mainly by rate and name, one: extended periods ranging from months to years.

- [Atheneter: A depressionaling forthward the depth of water is measured by noting the time the cone of a sound takes to return from the bottom
- File badges. Used for the indirect beasurement of isniving radiation. Generally centain two or times pieces of file of different radiation pensitivities. They are wrapped in paper (or other this material) that blocks light but is reachly penetrated by gawa rays. The films are developed and the degree of fogging (or blackening) observed is a beasure of the gasmaray exposive. From which the absorbed doce is calculated. File badges can also beasure beta and neutron radiation and thrays.
- Exceball. The Business spinte of not gases that forms a ten millionths of a second differ a nuobser explosion as the result of the observious by the surrounding modum of the thereal X-rays entired by the entropy her issues: these of millions of degrees) device residues. The excertage of the filebold in all is initially sharply defined by the lumbound shock from and later by the filebold of the hot gases themselves.
- flasion. The process of the nucleus of a particular neavy element spillting into two nuclei of lighter elements, with the release of substantial amounts of energy. The most separtant tissionable materials are unanium-235 and plutontum-239: fission is caused by the absorption of neutrons.
- Elission decentors Radiation pulse deterror of the propertional counter type in which a fost of file of fissionable materials is incorporated to make it respond to meatrons.
- Flasion products. A general term for the complex missive of substances produced as a result of nuclear fission. A distinction should be made between these and the direct fission products or fission fragments that are formed by the actual splitting of the heavy elebent moties this nuclei of medium storic weight. Approximately 68 different fission tragments result tran roughly 60 different modes of fission of a given nuclear species (e.g., cranter-235 or plutonies-2391. The fission tragments, being cationstive. immediately begin to decay, farm ing additional (daughter) products, with the result that the complex environ of Elission products so formed contribus over 300 different raillonuchtdes of 36 elements.

- fixed alpha. Alpha radioactivity that cannot be easily removed as evidenced by no activity removed on a swipe of a 100-cm<sup>2</sup> area.
- <u>Hubberschnich</u>. The Chieston of Hight Gelectromag methy radiation: by a paterial as a result of the susception of energy from radiation. The term may refer to the tadiation emitted, as well as to the emission process.

PPO. Floer Post Office (Wavy).

- tusion. The combination of two light nuclei to form a beauter recieva, with the release of the difference of the nuclear birding evening of the fusion products and the sum of the birding evergies of the two light nuclei.
- qappa rays. Electromagnetts radiations of high photon energy originating in accels notive and accorpanying pany nuclear reactions (e.g., fis sion, radioactivity, and neutron capture). Physically, gamma rays are identical with X rays of high energy; the only essential difference is that K rays do not brighnate from atomic nuclei of high energy. Comma rays cas travel great distances through air and can permetiate considerable chickness of material. atthough they can believe be seen not fell by human beings except at very high intensities. Which cause an itching and tinging sensation of the skin. They can produce harmion effects even at a loss distance from their scorpe.
- (#)ger gualler (x#), commerc. A gas discharge pulse conter for bontzing radiation. See also inclusion regis survey meter.
- GHT Greenwich mean 71mm.
- <u>gray (Gy</u>). A recently introduced ICRP term: I Gy equals (BQ rad).

ground zero (62). See wittgre sero.

- gunk: A viscous commercial preparation that is soluble with in water and petroleum derivatives it acts as a weiting agent in reboving grease and particulate entire five websi and other composition surfaces.
- 4\_bout. Time zero, or time of detonation, when used is connection with planning operations it is the specific time at which the operation event comparises. If i tedinates i nour before the detonation, and Mil Lochtages I pour before detonation, etc. Kinutes and seconds any with be instituted using this system. But the units used rust then be shown, e.g., H-10 whetes, P=55 seconds. See also D day.
- <u>half life</u>. The time required for a indicative material to lose half of its endecomplying due to decay. Each redictuolistic has a unique half-life.
- RE ■Igh ►kplostve.

#### hodograph

- h06\_2:eph. & composition of an encountry replacements the speed and direction of whole at different all finde increments.
- Not: So: spot. Commonly used to loguial communication a spot of ones celatively made folio define that some offerent Afra.
- COPP International consistences Radiological Properties
- initial radiation. Nuclear canballons of high proofy entitled free both the 'include and the radioactive blood within the first bloor after a defonation. If includes regions and gamma rays given off almost instantaneously (used)ly defined as growth judiation, which seel, as whill as the gamma cays officed by the firstoc ordered and none cays officed by the firstoc ordered and none cays officed by the firstoc rusing cloud, initial neurons from ground or rear ground busies charts to create activation products.
- (nverse\_square iner. The decrease is indication interastry with distance from a single-point source (s proportional to the square of the distance removed.
- Iog charges type survey repert & device Bos measdring the apparts of fonising radiation. For, sists of a gas (j)ed charges containing two electrodes (size of which may be the charges wall) between which a pomontal untrage dif for the is established in the radiation fonises gas in the charges and an instrument conterted to one electrode resources the limited a our rent produced.
- (a) <u>faction</u> The process of adding electricity to, or knocking electrons, from, atoms or molecules, thereby reparing long, high temperatures, electronel discretion, and nuclear radiation can cause boilization.
- Desiring radiation any particulate or electro magnetic radiation capable of producing bans, directly or initractly. In the parawaye Manager matters Alpha and Deta particles produce to parts directly, while gents may end X rays "(behave classifier as they staverse matter, which in turn produce periodical in their paths.
- isnosphere. The region of the atmosphere, extending from reaching 40 on 250 miles (about 65 to 400 int: above the Forth. In which there is ap yre: able ton(zaylon, The provide of charged particles in this region profoundly affects the propagation of table and table waves.

Invadianting - Reposite of Matter to table toru

- isidese jimes. Down on dose rate contours. In failout, contours glutted on a fadiation field at which the down cate or the total accumulated down is the same.
- isogepes. Arous with the same encoder number isome therical element: but different sturic weight:

i.e., the muched have the same number of protank but a different number of neutrons.

- tz. Muclassified giscellaneous ship (Wavy).
- •<u>TF</u> 1. Joint Task Posce 1 was a combined force of personnel of the Department of Defense (Army, Novy, Ratine Corps), the Manhartan Englrefer District, and their contractors, JOS 1 was responsible for all aspects of nuclear weapon responsible for all aspects of nuclear weapon resis to the Pecatic during 1966.
- Closen convention. Relates nuclear explosion energy to TNT explosion energy by using the approximate onergy release at 1.000 cons of TNT as the generating unit.
- <u>kinetic energy</u>. Energy associated with the metion of matter.
- .x 1 Informery Londing chaft inavys.
- for()} intentry lending (safe Clarge) (Navy).
- (CH. Rechardzed Landing Litate Olawy)
- (A)(<u>C)</u> Potenciel (meting chalt Charge) (Navy).
- cate(x), kettax.met Catting craft (ramp) (Navy).
- ACT. Seek landing craft (Navy).
- [son \_ Onliney Landdro realt (Rawy).
- ICVP, VebloLe and Dersconel Catding (1985) (Nave).
- CML Lockbut Mountain Luboralosy. Haliyward. Cellfornia (Air Mezew).
- Local Cord Cange wide to Makigation System. Local Stations were matchedowd by the V.S. Coust Quard Station on Porsectal (stand and Johnston Atol).
- (SP) Ookk landled ship theyy)
- ISIG. Infatury landing ship (large) (Keyy).
- 159. Medium landing ship (Savy).
- 15T- Tack Landley Ship (Kevy) .
- Loss. Letting (Anding Ahip (Navy),
- gagegiometer. At instrument ict measuring thanges in the geomegnetic (keid,
- projection (coverqy). Approximately the generic of energy that would be released by the explosion of one killion tons of TMT.
- elercosite. One entities the conte-
- niction. One attlifection of a secret (t.e., (C.G. secret of 10<sup>-9</sup> cectimeter); it is roughly four one hundred (how-atdrive (G. a., C.<sup>5</sup>) of an inch.
- gillingentigen. One-choosandub et a zoenegen.

- hPG: Maximum Permissible Unit: That amount of radioactive secondarism about water: foodstutist, etc. that is established by authorities at the wathout that would not create undue task up four-shift.
- mR: mr. Abbreviation for Allitreentgen
- respects <u>cap</u>. Top of the cloud forced from the threball of a rundear deformation.
- My. Motor vessel.
- NAR Haval Alt Hase.
- NAS Haval Alr Station.
- <u>H95</u> Sutional Sureau of Standards.
- NOD Soncommissioned highlight.
- MCMP, Warlong) Commission & Galisiton Protection and Arabarements. Herone 2956 singly the Mational Commission Protection.

WELL Navas Effectionles 4.00ratory.

- mention. A mention elementary particle (1.4., with neutral electrical charge) of approxiposely ords pass (1.4., the mass of a proton) that is present to all stode notiff, except those of environcy (light) hydrogen. Neutrons are required to initiate the fission process, and large numbers of restors are produced by tour fission and fusion reactions in not east explosions.
- neutrop just. The intensity of weatrow cudeation it is represent as the number of neutrons passlog through ) on? In 1 second
- Mic. Nevel Asterials Laboratory.
- MR1. Navat Redical Research Institute.
- NCB. Neval Operating Hakes
- NCL. Hevel Ordnerste Laboratory.
- NROL. Nevel Rediological Defense Laboratory.
- NWE Nevel Research Laboratory.
- NTER: Notleal Tool Personnel Pevlew.
- nuclear double (or weapon or bond). Any device in which the explosion cosults (now the energy referenced by continues towards atomic nuclei, either flavion or fusion, or both. Thus, the A for aromic, bond and the elicor hydrogen) band are both nuclear emapons, in would be equally true to call ther around emapone. Since the energy of aromic nuclear emapone, in would be case, however, it has become more or less cus (chary, although 11 is not strating accurate. to mater to emapons in which all the energy (enally from fination as A-bonds. In order to make a distraction, shows emapons in which

part of the energy reputts from their-anicipan (tusten) seartions of the isotopes of hydrogen have been called H-barbs or hydrogen bowles.

<u>nuclear explosion.</u> Explosive release of energy due to the splitting, or joining, of atoms. The explosion is observable by a violent exission of ultraviolat. Violble, and infrared (heat) radiation, genore rays, neutrons, and other particles. This is accompanied by the formation of a fiteball. A large part of the energy from the explosion is waiting as blast and shock waves when deconneed of the Sath's surface or in the algosphere. The fiteball produces a mothrobe shaped task of hol gaves and debries, the top of which times rapidly. See also radiation, genue rays, fiteball, medicar weapon, fission, blast.

numinal Susion. See thermonumly at tusion.

- number radiation. Particulate and electrosage the rediation emitted from signic model in various nuclear pricesses. The important nuclear radiations, from the emission standpoint, are alpha and beta particles, game tays, and beatrens. All on two gatherines der locking radiations, but the reverse is not true: X-rays, for example, are included among ioniging radiations, but they are red nuclear radiations since they do not originate from argebmasket.
- nuclear tests. Tests called out to supply information regulated for the design and inclusion of nuclear weapons and to study the phonomena and effects associated with outlear explosions.
- pathlet. Any species of atom that exists for a measurable length of time. The term barlide is used to describe any fidelic species dustin guished by the composition of its nations: i.e., by the number of protons and the number of neurons, isotopes of a given element are satisfies having the mortel number of protons but different partners of neurons in these nation. A continuestide to a subjective nation.
- (d) synther Rullation (or allow physical phonon contractor share the copyrity of a measuring device to measure.
- ONH. Othlee of Naval Re-March. Meshington, U.C.
- CRNL: Oak Ridge National Laboratory, Tenkessee,
- oscilloscopy. The name generally applied to a cathode cay device.
- cverpfessure. The transfert pressure, usually expressed in pounds per square inch, exceeding the emblent pressure, monificated in the shock (or blast; wave from an explosion.
- (327) S. Four wighte swaplace pation public der weboped for the Navy by Convertinated Alcorafy. Called the Coronado.

- PBAY:2 Four-engine patrol comber developed by Consolidated Altronait for the Nevy by modifying the USAAP 8 24. Called the Privateer.
- Pier Printergine, petrol-twicker flying boat, developed by Mattin for the U.S. Havy.
- PC. PALTOL (Main (Many)
- peak overpressure. The realised value of the over pressure inflich see: at a given location.
- permissible, doge that door of instance calledian that is not expected to cause appreciable bodity injury to a person at any time during his lifetime two also pp:
- AGR. Hoter gunboat (Nevy).
- plugation a volume of material closely approximating the density and effective atomic number of tissue. The phonton absorbs ionizing radiation in the same manner as tissue, thus radiation dose measurements made within the phonton provide a means of approximating the radiation dose within a human or onimal body under stat lar exposure conditions stategials commonly used for phontons are water, masonice, presedwood, beesvar, and planglas.
- <u>pig</u>: A heavily shirided container (equally lead) used to ship or store radioactive materials.
- POL. Petroleum, oil, and Lonitcants. The storage area for these products is referred to as a POL farm.
- Brompi zadiation Neutrons and Gazawa Jaya Weitted almost instantaneously (oliowing a suchear fission or fusion.
- <u>proron</u>. A particle catrying a positive charge and physically identical to the nucleus of the ordinary hydrogen alon.
- Purple conditions. A shipboard warning system used in reflectopical defense. Various numbered conditions were sounded when indicative failout was to be encountered. Responses in the sounded warnings included closing of various hatches and fittings. Lucning off perts of the ventilation system, and removing personal first a ship's open decks. The higher the Purple candition number, the more severe the radiolegical situation.
- <u>QR-17</u>. Redia-controlled version at the B-17.
- R. c. Symbol for countries.
- Re. Chectesi symbol For redica.
- rad. Rediation absorbed dope. A unit of absorbed duse of radiation energy. It represents the absorption of 100 ergs of ionizing radiation pet gram for 0.01 3/200 of absorbing material, such as body tissue. This unit is presently being teplaced in scientific literature by the Gray KGyb, numerical equal to the absorption of 1 jouin of energy pet kilogram of matter.

- RedDetense, Redicioqical defense. Defense spainst the attacts of radioactivity from atomic weapons. In includes the detection and measurement of radioactivity, rise protection of persons from radioactivity, rise protection of persons from radioactivity, and decontamination of oreas, glates, and equipment. See also teduafe.
- coder area. Pediological exclusion area. Following each detonarism there were areas of surface tedioactivity and sceas of air radioactivity. These dreas were designated as radex areas. Eader areas were used to thart actual or predicted failant and also used for control of entry and exit.
- caligg. Bediation detection. Indication. and com. putation.
- <u>rédiation</u>. The existion of any rays, electromagnetic waves, or particles (e.g., gamme rays, algha partirles, Deta particles, neutrons) from a source,

radiation\_decay = See decay (todiuscrive).

- (adjation detectors. Any of a wide variety of materials of instruments that provide a signal or indication when stimulated by the passage of bonizing radiation: the constrive element in radiation detection instruments. The most widely used media for the detection of ionization of games in detectors (e.g., Gelger counters). [blicked by materials in which radiation infuces scintitiation.
- <u>radiation</u> exposure. Exposure to radiation may be described and modified by a number of terms. The type of radiation is important: alpha and beta particles, neutrons, gamma rays and X-rays, and cosmic radiation. Radiation exposure may be from an external radiation source, such as gumma rays. X rays, or neutrons, or it may be from redicouclides retained within the body emitting alpha, beta, or gamma radiation. The exposure may result troks penetrating or nonpenetrating radiation in relation to its ability to enter and pass through matter - alpha and beta particles being considered as nonpenetrating and other types of radiation as penetrating. Exposure may be related to a past of the body or to the whole body. See miso whole body irradiation.
- radiation intensity. Rediation rate. Measured and reported in coerigens (R), rads, rems, and Multiples and divisions of these units as a function of exposure time (per hous, day, etc.).
- <u>redioactive</u> cloud, An all-inclusive term for the cloud of hot gases. Smoke, dust, and other perticulate matter from the weapon theelf and from the environment, which is carried aloft in conjunction with the rising fiteball produced by the detonation of a nuclear device.

redicactive nuclide. See redionuclide.

redioactive posticles. See redioactivity.

radiation in an area.

- sadioactivity, the spontaneous emission of suclear cadention, generally alphe or bate per ricles, often accompanied by gamma rays, from the muchet of an (unstable) nuclide. As a re suit of this emission the radioactive mullide a different (daughter) element, which may (or may not) also be radioactive. Vitinately, as a
- decay, a stable (nonradinactive) and product is tormed. <u>radiological survey</u>. The directed atlant to de termine the distribution and exposure rate of

result of one or more croges of radioactive

- tadionaciide & radioassive carlide (os radioacrive aromic species).
- redissonde. It baltoon-borne instrument for the simultaneous Resourcement and transmission of peteorological data, consigning of transmission for the measurchers of pressure, respondure, and humbdity: a modulator for the conversion of the output of the transmission to a quantity that controls a property of the radiofrequency signal: a selector switch, which determines the sequence in which the parameters are to be transmitted; and a transmitter, which generates the radiofrequency carrier.
- radiusonde\_balioph. A balloom used to starty a radiosonde adoft. These balloom used to starty a bursting alloweds of about RD.000 feet (25 kg) above sea (eve). The balloom measures about 5 feet (1.5 meters) in digaster when tirs: inflated and may expand to 20 feet (6 meters) or more before bursting at high allowed.
- radium. An intensely radioactive metallic element. In nature, radium is found associated with uranium, which decays to radium by a series of alpha and bela emissions. Radium is used as a radiation source for instrument calibration.
- rageals Radiological safety Ceneral tech used to cover the ttaining, operations, and equippent used to protect personnel from unoccessory exposures to ionizing radiation.
- <u>reinout</u>. Removal of radioactive particles from a zadioactive cloud by rain.
- cayin Redat whet sounding tests that dotermine the winds atoft patterns by rador observation of a bailtoon.
- ragingenge, Rader wird sounding and radiosonde (coabined).
- (B): Rejarive biological effectiveness & Locket used to compare the biological offectiveness of absorbed radiation doses (i.e., rads) due to different types of Lonizing radiation. For radiation protection the Lern has been superseded by Quality Factor.
- yes A special unit of biological radiation dose equivalent: the name is derived from the initial justers of the tore Traenigen equivalent

scintillation

wan (or mammal)." The number of reas of radia tion is equal to the number of rads absorbed multiplied by the RHE of the given radiation (for a specified effect). The rea is also the unit of done equivalent, which is equal to the product of the number of rade absorbed owiriplied by the "quality factor" and distribution. factor for the radiation. The unit is presently being replaced by the sizevert (Sv).

- cep. An absolute special unit of absorbed dose.
- <u>residue:</u> <u>nuclear radiation</u>. Michaer radiation, thiefly beta particles and gauge cays, that persists after 1 minute following a nuclear explosion. The radiation is emitted matphy by the flasten products and other bomb residues in the failout, and to some extent by Earth and water constituents, and other materials, in which radioactivity has been indiced by the capture of neurons.

R-hour. Recovery or reentry hour.

- roomigen. (R) () A special unit of exposure to games for K-) radiation. It is defined precisely as the quantity of gamma (or X-) rays that will produce electrons (in ion pairs) which a total charge of 2.58  $\times$  10<sup>-4</sup> coulomb in t Xilograp of dry air under standard corditions. An exposure of 1 toestgen results in the deposition of about 94 ergs of energy in i grap of soir body tissue. Hence, an exposure of 1 roomigen is approximately equivalent to an absorbed dose of 1 rad in poir (issue.
- <u>roli-up</u>. The process for orderly dispanting of facilities no longer required for nuclear test operations and their transfer to other areas.
- segpler <u>attends</u>. Aircraft used for collection of gaseous and particulate samples from nuclear clouds to determine the lower of radioactivity of the presence of radioactive substances.
- \$38. Search and rescue operations.
- SR-17. SAR version of the B-17.
- scattering. The diversion of radiation (inernat. electromagnetic and nuclear) from its original path AS a result of interactions for rotil Skans) with atoms, polecules, or larger particles in the atomsphere or other media between the source of the radiations (e.g., a nuclear explosion) and a point sume distance away. As a result of scattering, radiations (especially gauge tays and neutrons) will be received of such a point free many directions instead of only from the direction of the source. See atso <u>ntyphine</u>.
- SCEL. Signal Corps Engineering Laboratories. FL. Homanouth. New Jersey (Army).
- <u>scinthiligtion</u>. A flash of light produced by ion izing calletion in a Fluor or a phosphor, which may be crystal, plantic, gas, or liquid.

- Swindpunt. A substanting boundation itsing above the deep sha fiber: containing from 1.000 to (2.000 (ent i) to 1 km2 and having the Lombit 1.000 to 6.000 tout to 3 to 1.0 wai below one (evel.
- shear (wind) Refers to differences in direction (directions, shear) of wood of different air(tudet.
- shimbling. Any material or observation that absorbs for strenueces) radiation and thus tends to protect personnel or equipters from the of leves of a surfear explosion. A rederately rhore layer of any opaque esterial will provide satisfactory university from thermal radiation. but a considerable rhickness at takerini of high density gay be perded for gamma radiation shielding. One also attenualize.
- shock. Term used to describe a destinitive forme posing in air, water, of match swased by deto water of a modeur descention.
- shock wave. A continuously propagated pressure pulse (or wave) in the turnording medium, which may be also waver, or warth, initiated by the expansion of the bot gaves produced in an explosion.
- Silevent (20): A receively introduced 1090 measure of Técher equivalent. Use token into encode the equality factor of different sources of controly ratio too, one struct reputs 200 res.
- Atyshine, Radiation, particularly parame rays from a well-as detention, addring a tablet tronmany disections at a coupling of subfacting by rne byget and mitrogen in the intervation, accession.
- plant range. The straight line distance of enalternit as any altitude from ground zero of the distance from an altitude to a location on the partone
- \$5. Submarian (Navy).
- sirajo<u>mphone</u>. Upper portion of the simulation, approximately i to 40 sties the to 46 km obove the Eacth's suctaine in which temperature changes but little with without and cloud friends are case.
- srgeamiline. In meteorology, the distribution of the whet at any given time.
- susface buggs is nuclear expination on the land susface an island surface or cert, at we a harge
- surface zero. The point on the ground of witht surface disectly above or below the decomation point of a muchear device
- survey maters. Fortable (adiation deterrior in struments especially adapted for surveying or inspecting an area to establish the existence and about of contation present, usually itom the standpoint of radiological protection.

Survey Descriments are customatily powered by real-fockained batteries and are designed to respond quickly and to indicate directly the exposure care conditions at the point of interest. See Grager <u>Nucley</u> counter and inntheater type survey mater.

- Survey, <u>sappation</u> EValuation of the indiation tevels associated with cadioactive paterials or areas.
- <u>T\_AP</u>: Personne: (racspor) [Milling Sea Transportion Serv(ce).
- TBM. Single engine torgeds boater Sevelaged by Grunnan Alterait for the Kavy but assufactured by Signe L. Martin Company.
- QM Temperary duty assignment.
- 26 Task Group, Subordinate element of the John Task Porce.
- TD. Dask Detachment.
- EDERMAL Condition. Electromagnetic contraction embred in two pulses from a surface or strburst from the hiseball as a consequence of 11% very high respectators: It consists essenlisity of altraviolet, which is and betrared fadiation is the first pulse, when the tespetatore of the first pulse, when the tessecond pulse. The impedators are lower and sist of the thermal radiation first on the vistible and infrared regions of the spectrum.
- (WT equivalent) A measure of the energy released as the setup of the detonation of a number device of measure expressed in terms of the mass of TAT that would release the same amount of measury when englowed, for TAT multidupent to usually stated in klintons (1.200 tors) of regains it attains states). The basis of the TAT equivalence is that the explosion of the tat is assumed to release to bitten value les of energy. See also megatod, yield.
- propert registron, Flectrically charged particles nowing back and forth in spheric along the sorth-south orientation of the Earth's magnetic field between mirror points, called conjugate points. Negatively charged particles drift narrward as they bounce between northern and souther: conjugate points and positively charged particles divid vertward, this foreing shalls in beins of radiation along the foreing shalls in beins of radiation along the foreing shalls in beins of radiation along the foreing hier bries, or excitigal particles may be nausal, from rolar activity (often called Van hier bries), or excitigal, resulting from high alritude nuclear detonations.
- tropppause. The boundary dividing the strato sphere inder the lower part of the almosphere. The tropps/form, The troppymum randed by success et an attitude of about 25-000 to 45,000 feet (1.5 to 10.7 km in point and temperate cones, and of 55.000 feet (16.8 km) in the tropics. See also stratesphere, troposphere.

- troposphere the region of the envoyonce, take dianely above the Eacth's surface and up to the proposase. In which the temperature falls fairly requisity with increasing allitude, risulds form, convection is active, and Mixing is continuous and more or less complete.
- (rest Tearlinery The Marshall Colords were inclosed to the Trust Wereltopy of the Pacific Islands onder the jurisdiritod of the United Hations, Ausigned by the United Rations to the United States in trust for administration, dervetoppent, and training.
- TU. Task Unir.
- (ype corrander). The officer of agency having edge atzance over all Navy Ships of a given type. This is an addition to the particular ship's operational assignment in a task torce, Steet, or other lacebral mandatythien.
- UCLA. University of California, Los Angeles.
- UK, United Kingdom.
- gitraviolet. Electromagnetic indiation of wavelengths between the shortest visible violer letoul 1.856 angstrows) and soft K cays labout 100 Angstrows).
- DSPC. U.S. Porest Service.
- (SAS, United States Havy Ship: Vessels of this designation are manded by civilian crews.
- V&. Veterann' Administration.
- VC Fleet composite squadron fformerly VOL.
- Versenet. A detergent.
- VR. Nevel at: transport squadron.
- (MD3) Mobight Air Development Center, Mobight Patterson AFB. Obio (Air Force).
- estbeag The partition of the missile tr boob cost (atoling the nuclear device.)
- (8.29. meaning reconnisioner version of 8.29. moved for cloud tracking and sampling.
- <u>weapon\_dentis</u>. The radioactive residue of a nuclear device after it has been detonated, consisting of fission products, various products of neutron capture, weapon residue and other components, and userium or plutonium that has excepted itstion.
- whole\_body\_irradiation. Exposure of the body to lumining tadiation from external rediation sources. Critical organs for the whole body are the less of the eye, the goods, and the red-blood-forming marrow. As little as only i cm<sup>3</sup> of home marrow constitutes a whole body exposure. Thus, the online body need not be caposed to be classed as a whole body exposure.

- <u>Wilson cloud</u>. A slist of tog of mitude water drop lets that temporarily surrounds a fireball following a nuclear detoration in a number atmosphere. This is caused by a sudden lowering of the pressure fand temperature) after the passing of the shock wave (cloud chapter effect) and quickly dissipates as respectatures and pressures return to nothal.
- worightleg faileut. Consists of the smaller radioactive Packers detenation patifieles that as cend into the upper troposphere and the protosphere and are carcied by winds to all parts of the Barch. The delayed for worightlep failcut is brought to Earth, bointy by rain and show, over extended periods ranging from months to years.
- NT. Pretix of Weepon 2est (NT) report identification subbers. Toese reports were prepared to report the results of scientific experiments.
- WED. IN ADDITION FOR CHARGEOADS.
- YC Open Highser, nonself-properted (Mavy).
- VP Covered lighter, self-properted (Novy).
- YFN: Cowfred Highler, nonself propelled (Navy).
- yield. The total effective energy teleased in a parliest deconstion. It is usually expressed in terms of the equivalent roomage of ThE required to produre the same energy release in an explosion. The total energy yield is manifested as nuclear radiation (including residual radiation). Thermal radiation, and blass and shock energy, the actual distribution depending upon the willow both the explosion accurs and also upon the type of weapon. See TME equivalent.
- y14id (blast). That postion of the total energy of a multicar detonation that it identified as the blast or place wave.
- yield (fission). That parties of the total energy released by a reciber explosion attributable to nuclear fixsion, as opposed to fusion. The bareness in fission yield steps from the inter est in fission product formation and its relationship to radioactive failout.
- MS. Au+111677 Motos pines-Reper (Navy).
- YQ Public IS barge: Arth-properted (Navy).
- YOG: Gesoline barger sett-propetied (Navy).
- YOGN, Gasoilne barge: sonself propelled (Mary).
- YP Patrol craft (Havy).
- YM. Mates barge, self propelled (Ravy).
- ZL Zone of Interior [conterminous whited States).

APPENDEX F

RAUIATION READINGS ABOARD TARGET VESSELS

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# APPENDIX G SAMPLE TARGET SHIP DOSE RECONSTRUCTION

Chapter 12 discusses: the scientific dose reconstruction and lists the catculated film badge equivalent exposures for the crewmembers of the support and target ships. A sample target ship crew dose reconstruction is provided in this appendix. A detailed discussion of the reconstruction methodology is contained in <u>Analysis of Radiation Exposure for Naval Units of Operation CROSSROADS</u>. R. Weitz et al., Science Applications Inc., SAI 83-714-WA, DNA TR-82-5, 3 March 1982, Schematically, the reconstruction methodology is shown in Figure G-1.

Target ship crew dose reconstruction was chosen for this sample because target ship crew exposures typically were higher than support ship crew exposures, and their reconstruction involves all the elements of a support ship teconstruction as well as those unique to target ship crews. Target ship crews had the potential for receiving radiation exposures in the following radiological environments during CROSSROADS:

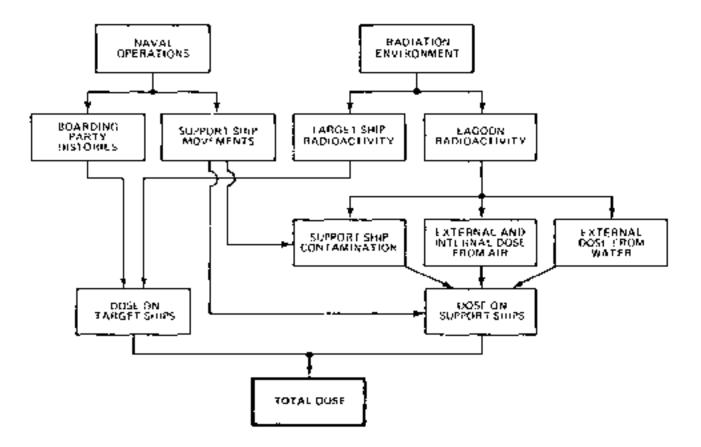


Figure 6.1. CROSSROADS ships' crew dose reconstruction methodology.

- Exposure to the low level of radioactivity in the lagoon water following Tests ABLE and BAKER
- Exposure while reboarding target ships for inspection and salvage after Test ABLE
- Exposure while living aboard those target ships that were remanned after Tests ABLE and BAKER
- Exposure while reboarding target ships for decontamination. Inspection. and preparation for towing after Test BAKKR
- Exposure while living aboard support ships, which accumutated low-level radioactivity on their external hulls below the waterline and inside the saltwater piping systems after Test BAKER.

Each target ship requires individual research to determine the drew's activities. The primary sources of information are ship deck logs, decontamination reports, commanding office: damage reports, radiological safety (radsafe) monitor reports, participant letters and comments, dosimetry reports, and CROSSROADS historical and technical reports.

The potential radiation exposure while aboard target ships after BAKER is the major contributor to total dose for target ship crows. Fortunately, the radiation intensities aboard target ships after BAKER are well dorumented. Often, the names of personnel who actually boarded the target ships are listed in deck logs. In those cases where names are not available, it is assumed in these reconstructions that all crewmembers, normally divided into four reboard ing teams, had an equal opportunity for exposure and that the teams colated when the ship was not boarded by its full crew.

USS Independence (CVL-22) is used as a representative case because it had a relatively large crew, was significantly radioactive after Test BAKER, and clearly shows all the steps taken in calculating a reconstructed dose. After being evacuated just before ABLE, its crew was housed aboard USS Rockwall (APA 230) from 30 June through 12 August. Independence was first reboarded after Test ABLE on 4 July. It was reboarded daily from 5 to 31 July by several teams, and the entire crew worked aboard from 12 to 24 July. An unidentified number of personnel remained aboard at night except for the Test BAKER rohearsal on 18 July. From 13 to 23 August, the crew betthed aboard <u>USS Alax</u> (AR 6). Independence was boarded between 18 and 21 August for some decontamination and inspection. Beginning on 17 August, the crew began to be transferred to other support ships for transport back to the United States. About half of the crew returned to the United States aboard <u>USS Artemis</u> (AKA 21), and this ship is the one on which the calculated exposure during the return trip is based. Each contribution to the total exposure in the reconstruction is discussed separately below.

#### POST-ABLE REBDARDING

The <u>Independence</u> crew commanced reboarding the ship on 4 July, after which the ship was boarded daily until 24 July. On 4 through 7 July, only two of the four reboarding teams came aboard. After 7 July, the number of teams reboarding is not clear so it has been assumed the entire crow was aboard. Beginning on If July, a small security team remained aboard each night. Since they are not identified by name, the potential exposure has been assigned to the entire crew.

The calculation assumes that the radioactivity on board the target ships following ABLE was due almost entirely to neutron activation of ship materials themselves. Since the detected radioactivity levels were rather low. It was necessary to calculate the radiation environments aboard the ships. This involved the analysis of the composition of each ship type. The amount of iron, aluminum, magnesium, copper, etc. in each ship type was ascertained and was assumed to be in a homogeneous mixture. This mixture was then assumed to be subjected to the AHLE weapon neutron nutput. The radioactive isotopes produced by the neutrons were then determined. The radioactive environment was then assumed to be the sum of the radiation from these isotopes as they decayed with the passing of time. This environment was used to derive the doses for the post ABLE independence reboarding shown in Table G.1.

Date	Parties Aboard	Calculated Intensity (R/24 hours)	Time Aboard (hours)	Percent of Day	Computed Dose <sup>3</sup> (rem gamma)		
4 July	leams A and B	0.070	3.5	0.145	0.00/		
5 July	Teams A and B	0.030	1.25	0.302	0.007		
6 July	leams A and B	0.015	7.5	0.312	0.004		
7 July	leams A and B	0.008	8.25	0.343	0.002		
8 July	All	0.007	8.5	0.354	0.002		
9 July	A11	0.005	9.0	0.375	0.001		
Q July	A11	0.005	8.5	0.354	5.001		
H July	A11	0.005	8.75	0.365	0.001		
2 July	A11	0.006	24	1.0	0.055		
lota I					0.001		

Table 6.1. USS\_Independence (CVL-22) post-ABLF reboardings.

#### POST BAKER REBOARDING

After Test BAKER, <u>Independence</u> was boarded on four days by the crew, 18 through 21 August. The names of all personnel who were in these boarding parties are contained in the <u>Independence</u> deck log. The number of <u>Independence</u> personnel aboard were 30, 44, 46, and 44, respectively, for each of the four days. There were two radsafe monitors with them on 18 and 19 August, three on 20 August, and one on 21 August. The number of recorded film badges for each day was 32. 44. 42. and 35. respectively; however, some of these badges were issued to non-<u>Independence</u> personnel. Therefore, a reconstructed dose was assigned to 24 personnel who were not badged on one or more of the boarding days. The contamination of most target ships following BAKER, including <u>Independence</u>, was extensive. For all target ships, detailed documentation of measured intensity levels was analyzed and summarized in the cited report and the results for <u>Independence</u> are shown in Figure G.2. This is the environment used to derive the doses shown in Table G.2. Table G.2 also shows the readings from the film badges issued to the reboarding parties.

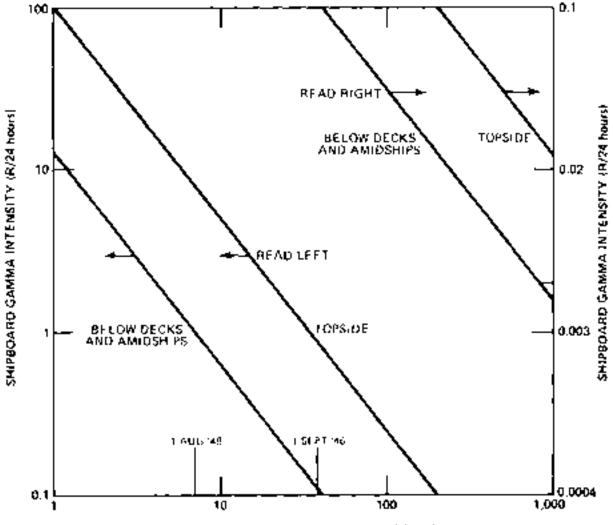




Figure G.2. Gamma radiation intensity aboard <u>USS Independence</u> (CVL-22) following Test BAXER, CROSSROADS. Note that the scales of this chart are not linear but are logarithmic and each division represents a tenfold change. Linear interpolation between divisions shown is not possible. Use the dates shown and the values entered in the lables as a guide in interpolating.

	Hours	Intensity from Figure 6-2 (R/24 hours)	Percent of Day	Computed	Issued Film Badge Readings		
leams	(total)			(rem gamma)	No.	Avg	Migh
A	4.2	1.6	0.175	0.196	32	0.044	0.090
A/8	3.9	1.5	0.162	0.170	44	0.048	0.160
A/8	5.2	1.4	0.216	0.212	42	0.033	0.090
Anchor Detall	4.0	1.3	0.166	0.151	35	0.052	0.180
	A A/8 A/8 Anchor	Aboard (total) A 4.2 A/8 3.9 A/8 5.2 Anchor	HoursFromAboardFigure 6.2leams(total)A4.21.6A/83.91.5A/85.21.4	HoursFrom AboardPercent of DayTeams(total)(R/24 hours)Of DayA4.21.60.175A/83.91.50.162A/85.21.40.216Anchor	Hours         from         Computed           Aboard         Figure 6.2         Percent         Dose <sup>2</sup> 1eams         (total)         (R/24 hours)         of Day         (rem gamma)           A         4.2         1.6         0.175         0.196           A/8         3.9         1.5         0.162         0.170           A/8         5.2         1.4         0.216         0.212	Hours         from         Computed           Aboard         Figure 6.2         Percent         Oose4           Ieams         (total)         (R/24 hours)         of Day         (rem gamma)           A         4.2         1.6         0.175         0.196         32           A/8         3.9         1.5         0.162         0.170         44           A/8         5.2         1.4         0.216         0.212         42	Hours         from         Computed         Reading           leams         (total)         [R/24 hours)         of Day         (rem gamma)         Ho.         Avg           A         4.2         1.6         0.175         0.196         32         0.044           A/8         3.9         1.5         0.162         0.170         44         0.048           A/8         5.2         1.4         0.216         0.212         42         0.033

Table G.2. Post-BAKER reboarding dose reconstruction, USS Independence (CVL-22) crew.

<sup>a</sup>Dose = percent of day x intensity x 0.7 (film badge correction factor).

Calculated exposures are higher or about equal to maximum film badge exposure because all target ship calculations use the topside intensity curves shown in Figure G.2. The ship inspections required personnel to be below deck much of the time, thereby resulting in lower film badge exposures. Exposures were individually assigned to the 24 personnel who were not badged.

#### SUPPORT SHIP DOSE

The <u>Independence</u> crew was evacuated to <u>Rockwall</u> on 30 June and continued to berth aboard this transport through 12 August. The crew transferred to Ajax for the period 13 through 23 August. There was no contribution to the total dose of the crew while on the support ships due to ABLE. However, the BAKER detonation contaminated portions of the Bikini Lagoon. Support ships returning to these areas became contaminated on their exterior hulls and internal water lines.

Modeling this environment was based on what information was available concerning the movement of the Red and Blue Lines (see main text) and other data about levels of lagoon water radioactivity. In developing the support ship model, time-dependent, external hull gamma intensities for all ships were derived from bull intensity readings taken on 12 of the support ships after departure from the lagoon, and from the individual ship movements in the contaminated water environment. The external bull gamma intensity was derived from measurements for 16 of the support ships and the geometric mean of this value was used for the remaining ships, including Rockwall and Ajax.

The external hull gamma environment and an additional gamma emission from interior piping were used in the cited report to calculate a dose for the crews while aboard the support ships. For the <u>Independence</u> crew while aboard Rockwall. until 12 August, this amounted to 0.035 rem (gamma): and for their dose while

aboard Ajax from 13 August to 23 August, it was 0.012 rem (gamma).

### POST-BIKINI DOSE

The final portion of the calculated exposure covers the period of time personnel were aboard a support ship on route back to the United States. This resulted from the recention of low-level contamination on most support ships after Test MAKER.

The independence crew was transferred to ten different ships between 17 and 28 August. About half the crew returned on Artemis and nearly a quarter on Alax. This contribution was calculated based upon Artemis because the largest percentage of the crew was aboard it, and <u>Artemis</u> was more contaminated when it left Sikini Lagoon than was Ajax.

A number was determined for each support ship that characterized its radiological condition when it left Bikini. This number, called the ship departure factor, was based on the exposure history of each ship during its stay in the lageon, and represents the hul! intensity on the day of departure. For <u>Artemis</u> the number is 5. A nomogram (Figure C.3) is used to correct for the decrease in shipboard radiation because of decay of the radioactive emitters during the trip from Hikini and the observed decontamination effects of steaming in the open ocean. The nomogram is entered at the Bikini departure date (BAKER + 28 days) and read at the intersect with the San Francisco arrival date (BAKER + 43 days). The factor obtained (4) is multiplied by the ship depatture factor (5) to determine the reconstructed badge exposure in miliitem (20).

#### SUMMARY OF RECONSTRUCTION

These values were then used to assign uniquely determined. Scientifically calculated doses for <u>Independence</u> personnel. Assignments were made to several clearly defined groups: those personnel who were at ABLE and BAKER but did not reboard <u>Independence</u> after BAKER, those personnel who did reboard after BAKER but were badged for all four days, and those personnel who did reboard after BAKER but did not wear a film badge every day. The calculated exposures are in addition to any recorded film badges that were worn. The total calculated and recorded film badges for the crewmembers of <u>Independence</u> ranged from 0.148 rem gamma to 0.448 rem gamma.

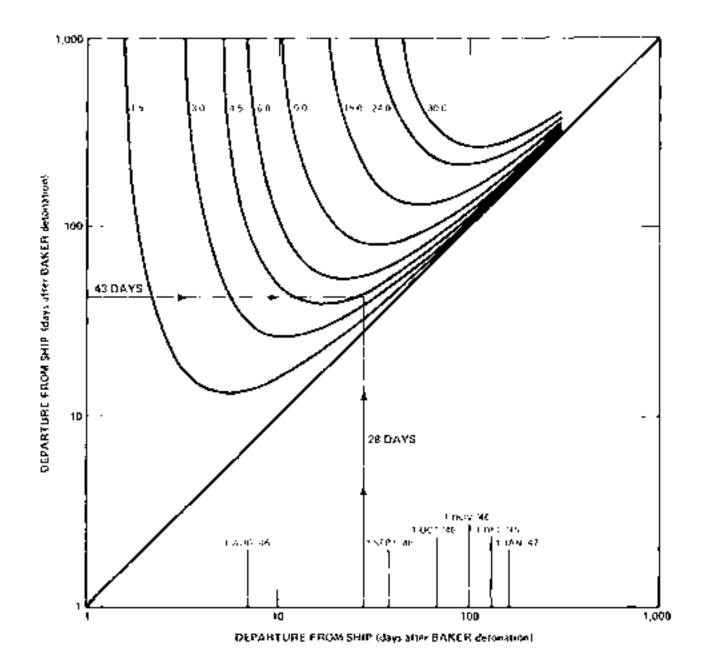


Figure G.3. Nomogram for reconstruction of dose for personnel returning from Bikini after CRUSSROADS. Arrows illustrate example from text.

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